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manpower

Men and Machines

Some years ago city buses in Minneapolis carried placards stressing the importance of education. One card showing a computer said: "What will you do when this learns your job?"

Underneath someone had penciled a reply: "Stay home and let it pay taxes."

Actually, automation has not thrown many people out of work, as was once feared. But there have been vast changes in technology in recent years, and these changes have affected many jobs and workers.

Two articles in this month's MANPOWER deal with machines and their impact on workers. *Technological Change: How Fares the Worker?* reports on a nationwide survey which shows that the introduction of new or improved machinery usually results in better pay and more job satisfaction. In fact, the study indicates that workers may be adversely affected if their employers don't keep abreast of technological advances. And it also points out that when technological change does generate unemployment, the least qualified workers are hit hardest.

That certainly has been the case in the mining industry, where machines have driven the pick and shovel into retirement and cut deeply into the demand for unskilled labor. With the mine industry booming, skilled mechanics to maintain and repair these machines are in great demand and can earn $10,000 a year and more. It's no wonder, then, that a 44-week program to train poor people for these jobs is popular with employers and program graduates, as is made clear in *Mine Mechanics Dig Their Prospects.*

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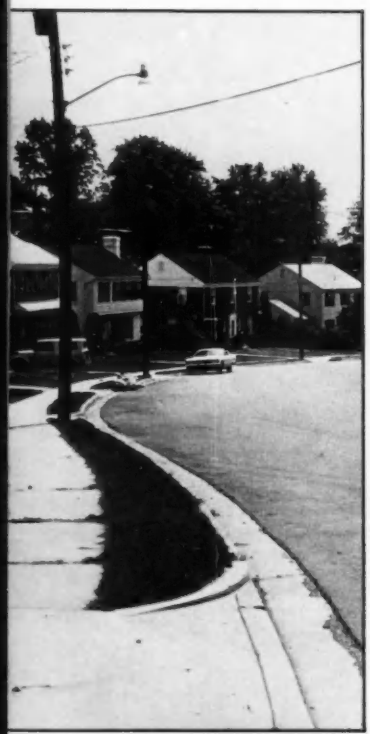

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SALE OR LEASE
Industrial Park
Jobs Go

By Ernest Erber

The type of metropolitan region we are creating in the United States is proving unworkable. Relatively new in a historical sense, these regions represent a form of social organization that has yet to demonstrate its ability to adapt to technological changes and to provide equal access to opportunities in housing, jobs, and education for all races.

For the past year, the National Committee against Discrimination in Housing has been studying housing and job patterns in the largest and probably most highly developed of these regions, the New York Metropolitan Area; specifically seven of its suburban counties selected for extensive field work. What we discovered was the same evidence of structural and functional deficiencies in Metropolitan America turned up by two Presidential Commissions (on housing and on community development and zoning) and signs of a crisis-ridden future uncovered by two others (on civil disorders and violence). The cities are (or will be) black and the suburbs are white; there is unemployment at the core and a labor shortage on the periphery; overcrowding in the old cities contrasts with big lots in the growth areas.

Our investigations found, for example, that labor shortages have been created in new factories, offices, and stores being built around New York City, because lower income people, especially from minority groups, are unable to live in the suburban towns where these businesses are situated. Between 1959 and 1967 New York City lost 47,110 manufacturing jobs while its suburbs gained 138,440. And these were the jobs most suited to low-skilled workers with little formal education. But 70 percent of the region's blacks and Puerto Ricans live in New York City. Many of the rest live in Newark.

It is not the purpose of our study, funded by the Carnegie Corporation of New York, merely to add weight to what others already have discovered. Our inquiry, which will continue for another year, is needed to identify the forces which distribute population according to income and race, and those which distribute employment in accordance with industrial growth patterns.

The unworkability of the present metropolitan arrangement can be traced to many separate factors acting together to give us economic, social, and spatial patterns no one foresaw. This suggests that topsy-turvy suburban expansion must give way in critical areas to planned growth; that the blind forces of the market place, including competition between local governments for fiscal advantage, must yield to overall, deliberately chosen objectives.

What will bring about this transition from an unworkable to a workable arrangement of homes and jobs for people of all races and incomes within a region? Are there counter-trends at work that will mitigate the present course toward—in the words of the Kerner Commission—"two societies, one black, one white—separate and unequal"? Or must present trends be permitted to run their course before significant counter-forces can become effective?

Study Reveals No Counter Trends

Our study has failed to reveal any counter-forces presently in motion capable of blunting the impact of current trends. We are led to the gloomy view that things might have to get a lot worse before they get better; specifically—

- Before affected local governments will consent to housing for lower income groups, including minorities, suburban economic growth must first be arrested by labor shortages.
- Before State legislatures act to open suburban housing sites for low or moderate income families, concentration of these people in older cities is likely to grow until the financial strain makes these cities wards of the States.
- Before blacks and Puerto Ricans gain effective access to suburban jobs and housing, angry ghetto dwellers may be provoked to disorders that bring the cities' transportation and commerce to a standstill.

Nor can the conditions making the regions increasingly unworkable be reformed by small adjustments or gimmick solutions (such as special buses from ghettos to suburban job centers). Changes are needed in the type and cost of housing and in its distribution in relation to employment opportunities

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Where the Poor Can't

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—changes so basic as to replace present metropolitan arrangements with new urban forms and functions. These changes would truly involve a traumatic experience for many suburban residents.

The very size of the new metropolitan regions has introduced qualitative changes in the nature of the phenomenon of racial separation. Under chattel slavery in the South, the races were never separated by more than a few steps. Under the de jure segregation of the post-Reconstruction South, the races continued to live in close proximity. In the urban North, however, residential patterns of blacks assumed a ghetto character at an early stage.

The problems remained manageable for many years because the relatively small size of even the largest cities, together with inexpensive and convenient public transportation, permitted Negroes to have reasonable access to most parts of the city. Today, however, within metropolitan regions, especially the larger ones, separation by race means massive ghettos and hundreds of thousands of blacks (and lately of other minorities) living 1 to 2 hours' travel time from massive concentrations of whites in suburban areas.

The New York region has more than 20 million people, equaling the population of Canada; its land area of 13,000 square miles exceeds that of several countries represented in the United Nations. Within this vast complex, Harlem is as remote as a separate nation from Scarsdale, Short Hills, or Oyster Bay in terms of person-to-person contact in any field of human endeavor. The whites and blacks learn about each other's communities only through the news media, mainly television.

On the economic level, this separation hurts whites as well as blacks, because it creates costly artificial labor shortages. Drawn from the region's ghettos by relatively high wages, about 2,000 black employees have jobs at the Ford Motor Company's plant in Mahwah, N.J., and must travel 20 to 40 miles to and from work. Some 38 percent of the Ford plant's employees are black or Puerto Rican. Public transportation, designed to move suburban residents to jobs in the city, is almost useless for workers traveling in the opposite direction. Car pools are therefore the usual arrangement, and auto ownership and operation costs are especially high for city dwellers.

The Ford plant suffers from an unusually high absentee rate because bad weather interferes with driving such distances. The situation is worse in the service industries. In nearby Paramus, where labor is short, there are few black faces among the thousands of clerks employed in the enormous retail concentration formed by two major regional shopping centers. Most of the surrounding communities are "lily white" and retail wages are too low to attract blacks from distant ghettos. The region is drifting into the ultimate in separation by race, the emergence of an all-black (or all minority) central city ringed by a solidly white suburban belt. This also will be the ultimate in the unworkability of the metropolitan region.

'Filter-Down' Process Won't Work

The "filtering down" of city housing, a process that served the poor well in the past, has far less potential for alleviating today's racial separation and its economic consequences. Until the advent of public housing in the 1930's, urban lower income families rarely occupied new housing. Even newly constructed tenements rented to the better paid workmen. Most low- and moderate-cost housing filtered down as upward mobility carried prospering families to better homes in better neighborhoods. This process necessarily supplies the bulk of housing needed by families of modest incomes since the cost of constructing new housing for every family in this large segment of the population is neither necessary nor feasible.

Filtered-down housing served successive generations of European immigrants as steppingstones as their earnings and living standards improved. But such housing in the central city falls short of meeting the needs of blacks today when the new jobs are being created in the suburbs.

It is not yet clear whether filtered-down housing in the suburbs will be available to minority families in search of better paying suburban jobs. Present indications are that the situation will vary considerably in the various parts of the region. It will be affected by the relationship between the price of suburban housing and wage levels in suburban industries; the volume and rental levels of suburban apartment construction; proximity of housing to major suburban employ-

ment centers; and lessening of discrimination by brokers, sellers, and landlords.

The prospects do not appear promising. Whites now living in the older suburbs of New York (and Newark) find it inconvenient to get to work by bus or rail. They are not apt to add to their travel time by buying new homes farther out. Nassau residents who commute to New York City are a case in point. Unless the Long Island Railroad cuts down travel time appreciably, it is unlikely that many Nassau commuters will move willingly to Suffolk County. Meanwhile, the need for manufacturing, retailing, service, and Government employees in Suffolk continues to increase. Not much housing will filter down in that rapidly developing county.

It would appear, then, that a far higher proportion of Negroes and Puerto Ricans accepting suburban employment will, of necessity, have to occupy new homes and apartments than was the case with upwardly mobile immigrant households who relied almost entirely on filtered-down housing in city neighborhoods. The cost of new housing is always greater than that of existing housing, especially today. Society may have to assume this added cost as part of the price of undoing past years of neglect of, and discrimination against, blacks and Puerto Ricans. Unless such housing is made available in the suburbs, whole cities will filter down to blacks and Puerto Ricans (Newark and Washington, D.C. are well on the way).

To understand the full economic impact of segregated housing, we must bear in mind that most jobs are population-based. Some economists estimate that for every national market-based job three more (grocery clerks, dentists, laundry workers, teachers, etc.) are needed to serve the local consumer. The greatest gains in suburban jobs today are not in manufacturing but in retailing, wholesaling, services, finance, utilities, communications, and government. These are the jobs normally held by people who live nearby.

The universal complaint of suburban employers about labor shortages reflects the abnormality of labor force distribution due to separation by income and race. In the initial phase of suburbanization, a residual local labor force is available from earlier rural settlement. This reserve is absorbed as higher income residents pour in and stimulate the growth of retail, service, and other population-based employment, and as suburban manufacturing expands.

Since most new suburban residents come to live in the community, not to work there, they add little to the local labor force. Employers then turn to the secondary suburban labor market, mainly housewives and teenagers. Our study of the wholesale and retail industries in the New York region found that work schedules, store hours, and other factors are manipulated to suit the availability of such employees. Because they draw workers from local areas, retail suburban enterprises employ very few blacks or Puerto Ricans.

The people whose decisions are creating the unworkable metropolitan format are trying to ignore an elementary fact of economic life: That to meet the trade and service needs of the higher income population requires the presence of lower income groups. Among these decisionmakers, the real estate dealers occupy a prominent role. This industry has traditionally extolled the residential idea of the one-class, one-race neighborhood. Real estate ads frequently rely on snob appeal and abound with words like "exclusive." Its salesmen frequently assure the buyer that the house for sale has the advantage of enabling the customer "to live among your kind."

Zoning Blocks Low-Income Families

Suburban municipal officials, especially planning and zoning boards, use local land control authority to make the realtors' dreams come true. Large lot zoning keeps out all but the prosperous. Vast areas of New York's suburbs are now one class and one race (often one religion) in residential composition.

Excluding families with low incomes is highly advantageous to the residents of the suburban communities who do it, to the cost of their neighbors and the region as a whole. They gain financially in the same manner as landlords who exclude families with children; maintenance costs are lower. Communities seek to exclude the poor because they need a variety of social services the prosperous can do without. In many States, however, landlords can no longer discriminate against families with children because laws prohibit it. But discrimination against lower income families through zoning (e.g. re-

quirements that 80 percent of apartments be one bedroom and 20 percent two bedroom) and other local controls continues with legal sanction. And the cities are stuck with the poor—and with the bill.

Moral exhortation rarely does any good. Suburban communities continue to turn a deaf ear to pleas for change. Large-lot zoning is on the increase. Suburban communities will willingly reverse their course only if it can be demonstrated that what they are doing is not to their financial advantage.

The best candidate at the moment in the New York region is Westchester. With the exception of its lower tier of old cities, this county has probably realized the real estate man's "ideal" more completely than any other suburban area. It is so solidly upper middle class and upper class that the shortage of help for population-based trade, service, and local government jobs has reached serious proportions. A conflict of interests is developing between homeowners and entrepreneurs. Westchester banks, newspapers, utilities, and chambers of commerce, normally promoters of economic expansion, are confronted with increasing difficulties in selling Westchester as a location for office and research operations in view of the unprecedented labor shortage.

Suburbs Must Raise Housing Density

But as noted earlier, it would be unwise to rely solely on haphazard economic forces to bring about a needed redirection. If experience is any guide, we will also need judicial intervention to protect minority rights or a revision of State laws to bar exclusionary practices of municipalities.

Such exclusionary practices are in conflict with another development: The "Europeanization" of housing. High land costs and high money costs have been typical conditions of the urban housing scene in Europe for over a century. As a consequence, multifamily or attached housing has been the prevailing type in European cities. Recent trends in land and money costs are giving the American housing market a strong European cast, especially in the New York region, with its historic conditioning for this type of living.

Housing patterns in New York have been unique in comparison to American cities generally, including most of the large ones. Population pressures on land areas and the resultant high land costs gave New York City, exclusive of Staten Island, extremely high densities. The tenement house, the apartment house, and the row or attached house were home to most New Yorkers.

The same factors of population pressure and land costs became operative in New York's suburbs as long ago as the 1920's, with the same resulting tendency toward multifamily construction, though in lesser degree than in the city. Suburban apartments found tenants more easily in the New York region because of a widespread familiarity with apartment living. After World War II, the construction of suburban apartments flourished for a few years in the region until suburban zoning began to curb it.

During the 1950's, single-family homebuilding was in its heyday in New York's suburban areas, with increasing numbers of local governments resorting to large-lot zoning and exclusion of apartment construction as a device to slow down population growth, thereby reducing pressures on schools and other local costs. Large-lot zoning accelerated the absorption of available vacant land in a land-short, highly populated metropolitan region.

During the 1960's, land costs skyrocketed in the region and, together with increased demand for small units triggered by demographic change, stimulated a new interest in multifamily construction in the suburbs. As the cost of mortgage money rose, increasing numbers of families were priced out of the market for single-family dwellings and were added to the rental market.

However, the trend toward "Europeanization" and most suburban zoning are on a collision course. The former expresses the needs of a growing population in search of living space; the latter expresses the resolve of those already on the scene in suburban areas that living space will not be granted at what they believe to be their expense, either in terms of tax rates or low-density environment.

A new factor now enters the debate. The Nation is awakening belatedly to the threat of environmental deterioration,

largely because of the careless location and operation of industrial processes and the unplanned spread of urbanization without regard for land, water, or air. Low-density suburbanites see this national concern with the environment as an argument for large-lot zoning and the exclusion of additional people from the suburbs.

Research might well establish, however, that the "Europeanization" of housing, by clustering and concentrating population, contributes to the conservation of land. A high density population permits economies of scale in treatment of sewage, solid waste incineration, and smoke control, and would thus act as a conservation aid. Construction on 1- or 2-acre lots, on the other hand, usually results in a waste of land, and in sewage and solid waste disposal problems.

Public Housing Needed in Suburbs

What will be required to give Negroes and Puerto Ricans access to suburban jobs and housing on an equal basis? NCDH studies of the New York and San Francisco regions in the past year suggest what can be done.

First of all, of course, there must be a reform of suburban zoning practices to reduce lot sizes, or to permit more apartment buildings. But this alone is not enough. Factory workers in the New York region in 1969 averaged $129.23 in weekly wages and service workers even less. These people cannot afford either to buy new single-family homes or to rent new apartments with two or three bedrooms. A four-room new apartment in this region would cost a minimum of $45 per room per month in rent, or a total of $180.

It is clear that making a free choice of residence available to these minority families will require massive efforts by governments at all levels and by private corporations. A first-stage goal might be to provide nonghetto housing for a sufficient number of minority families to offset expansion of the urban ghetto population. Currently, this would require housing in nonghetto areas for an estimated 700,000 nonwhites (about 200,000 households) annually on a national level. There is already in existence today a wide assortment of Federal and State programs to reduce the cost of housing for low-income groups. Most of this housing is now being built in the central cities; much of the effort should go into the suburbs, where the new jobs are.

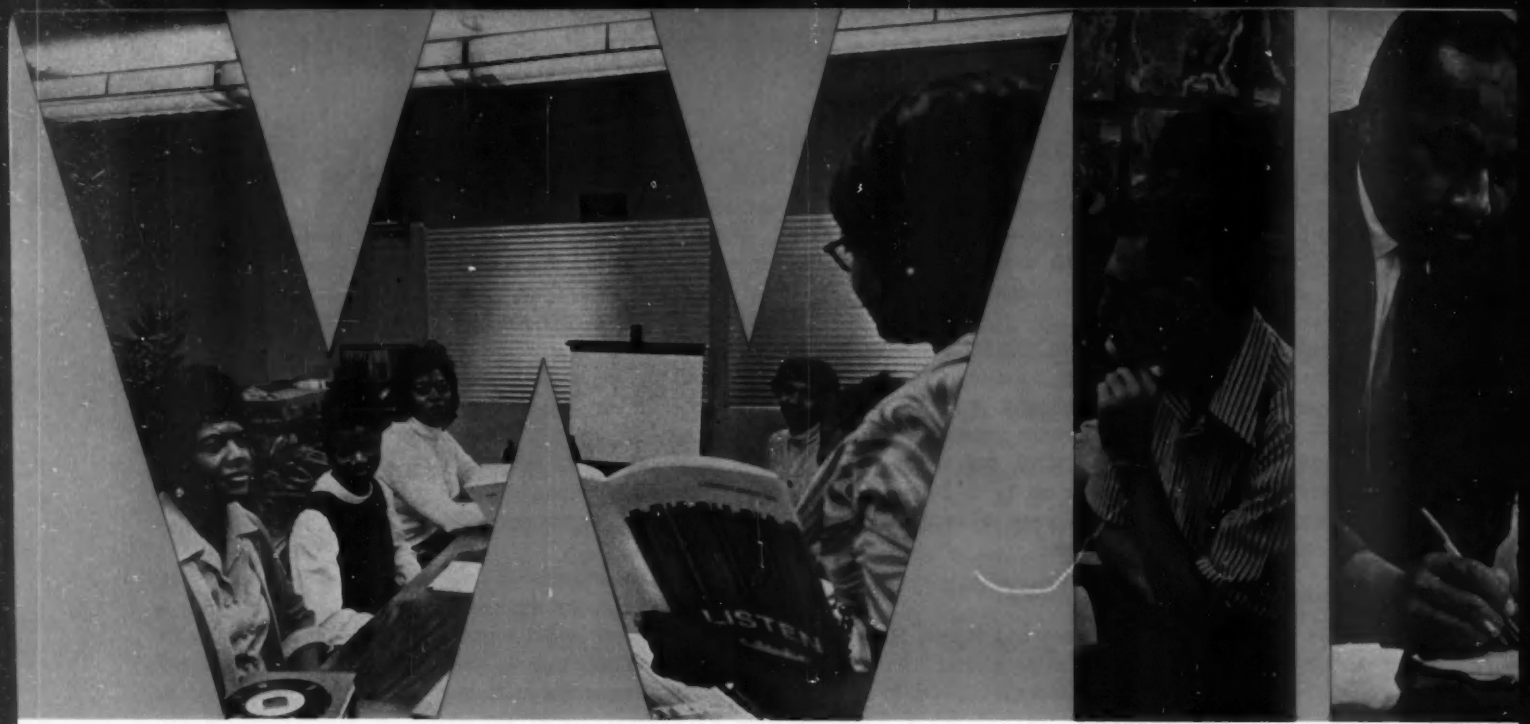
The concentration of publicly assisted housing in central cities—because the suburbs do not want them and effectively bar them—is usually rationalized by a solicitous regard for keeping intact the city neighborhoods cherished by Negroes, Puerto Ricans, and other low-income groups. If one accepted this as valid, the devotion of minorities to blighted city neighborhoods in preference to suburban employment and housing would be a historic first. Certainly no such devotion was visible among the millions of whites who have deserted their city neighborhoods in the last 25 years even if it meant an arduous daily commute from the suburbs to their jobs in the cities.

The prevailing evidence is that minorities are mobile in pursuit of opportunity for improvement. Harlem's population is declining. Negroes and Puerto Ricans have moved to other parts of New York. Usually they land in another ghetto, but the fact that they move indicates they want something better. Previous studies support the view that these minorities do not willingly choose to live in ghettos. At all events, they are entitled to a choice.

It is not beyond the resources of the Nation to make a massive effort to give them this choice. Compared to the miracle of production in World War II, also involving manpower training and placement and housing construction, the provision of jobs and housing for 200,000 nonwhite households is not a fiscal or resource problem in the light of a goal established by Congress in 1968 to build 2.6 million dwelling units per year.

It will require stronger open housing laws and more efficient enforcement; but this will not suffice by itself. It will require a supply of housing at costs scaled to the earnings of minority workers in nearby industries throughout the region; but even this will not suffice. It will require fair employment practices and training programs geared to tap the full potential of the minority labor force; but this by itself will not suffice.

It will take a national commitment to do it comparable to World War II's commitment to victory; in the words of William James, "the moral equivalent of war." □



The Work Incentive (WIN) Program now is operating in 49 States, the District of Columbia, Puerto Rico, Guam, and the Virgin Islands. It is motivating and training welfare recipients to become employed. It has placed 27,000 of them in jobs and moved over 10,000 of them off welfare.

But there are problems. The health and day care problems that are barriers to employment have not been completely alleviated by the program. Cooperation between welfare agencies and State employment service offices got off to a shaky start, but now is improving rapidly. Scheduling difficulties, especially for formal training, have not been fully resolved. Special work projects (government-sponsored employment) are barely off the ground.

These are some of the main points in the Department of Labor's First Annual Report to the Congress on WIN. The report covers the program from its inception in mid-1968 to April 30, 1970. In submitting the report to Congress, Secretary of Labor J. D. Hodgson said experience gained in operating the WIN Program identified "the need for changes . . . that will greatly increase its effectiveness." These changes have been incorporated in the Administration's proposed Family Assistance Plan, Hodgson said.

WIN combines social, child care, and manpower training services to prepare welfare recipients for employment, using a combination of on-the-job training, classroom education, and work experience. Special work projects were authorized to employ WIN graduates who cannot find work in the regular economy.

An incentive payment of $30 per month is paid to persons in training. Manpower services for WIN participants are handled by a team which includes a counselor, manpower training specialist, job developer, and a "coach," who works closely with the trainee. Each enrollee is assigned to a specific team which helps him develop an employability plan and which oversees his progress from the time he is accepted for employability development until he has been at work for 90 to 180 days.

Funding of projects began in mid-July 1968, with significant enrollments and program operations beginning the following October. As of June 1, 1970, only New Hampshire was not funded.

As of April 1970, about 153,000 persons had been enrolled. More than 72,000 were still being trained, nearly 27,000 were at work, and more than 53,000 had dropped out. WIN placed about 26,000 people of the 27,000 at work in regular jobs, primarily in private industry. The rest were in special work projects. In addition to the 10,000 WIN graduates whose jobs enabled them to leave welfare entirely, others were able to support their families partially, so welfare payments were reduced. In these cases, the welfare family may have been so large that a low-wage job was not sufficient to provide for all the children.

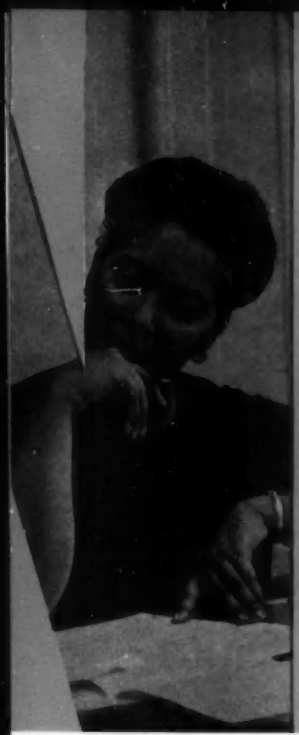
Average pay of WIN graduates after 3 to 6 months on the job was $2.29 an hour. Men have done much better than women. Nearly half of the men started at wages of $2.50 an hour or above. But 85 percent of the women made less than that and nearly half of the women started at less than $2 an hour.

Clerical Jobs Top List

More WIN graduates—about 21 percent—have gone into clerical and sales work than any other occupation. Another 19 percent have gone into service jobs, such as hospital attendant, food and restaurant work, janitor, and beautician. Nearly 14 percent entered the structural trades—mostly in construction. Professional, technical, and managerial jobs accounted for 6 percent.

Some 66 percent of WIN applicants blame lack of education and skill for their unemployment. Another 9 percent cited transportation problems. Lack of child care was given as the reason by 15 percent of the women.

Very little information is available on



Problems Progress Prognosis REPORT

the current status of the 53,000 participants who dropped out without completing their employability plans. A sample of about 11,000 dropouts showed that a substantial number gave reasons which apparently had little or nothing to do with program design or administration. About 20 percent blamed such factors as illness or pregnancy. Seventeen percent moved or could not be located. Some 15 percent refused to continue, a possible indication that they were unhappy with the types of jobs for which they were being trained.

The high proportion of enrollees who were sick suggests the need for timely physicals and appropriate health care followup. Eleven percent left because of problems with child care or transportation, which should be correctable with improved program design.

The data on wage rates suggest that many welfare mothers, after training and employment, will not be able to make enough money to bring their families out of poverty. If they must pay for day care, or even after-school and summer care, out of their wages, there may be little incentive for leaving welfare to work. WIN provides day care payments to participants during training and the first 3-6 months of employment, but after that, day care costs usually must come out of wages.

The ratio of women heads of households in the program is increasing; they comprised 71 percent of the 1970 enrollments in contrast to 60 percent in fiscal 1969. Severely undereducated enrollees—with eight grades of schooling or less—accounted for only 25 percent of the 1970 enrollment compared to 31 percent the previous year. This trend appears to reflect the generally higher level of educational attainment found among female WIN participants than among males.

Most Participants White

Some 54 percent of the participants have been white, 40 percent Negro, and 6 percent members of other minorities. The typical enrollee is a school dropout; 25 percent have completed eight or less grades of school and another 43 percent have not completed high school. Nearly 75 percent of all participants are aged 22 to 44, 6 percent are over 44, and 22 percent are under 22.

The problems normally encountered in launching a program as big and complex as WIN were aggravated by several features of the WIN concept itself. Close coordination is required between government agencies at all levels — Federal, State, and local. In many instances State employment and welfare officials were not used to working together and early in the program they often had difficulty coordinating their actions.

Referrals sometimes were made faster than training components could absorb new recruits, or appropriate components were not in operation. Some of the people referred were found unsuitable for training. And developing individual employability plans proved considerably more time consuming than the simple enrollment procedures used by many training programs.

The comprehensive nature of WIN requires precision in scheduling the movement of individuals between training components and in arranging for supportive services, especially day care.

Guidelines dealing with these and other troublesome matters have since been issued by the Department of Health, Education, and Welfare, which shares primary responsibility for the program on the Federal level with the Department of Labor.

"Holding" was a major problem during the first months of the program. A WIN participant is put into this classification when he is between components —for instance, when he has completed orientation and is waiting to go into classroom or on-the-job traning. At the outset, many participants had to wait while job training opportunities or educational courses were developed. As program components were developed, the proportion of people waiting for initial training

or program services was reduced from 35 percent of enrollments in January 1969 to 9 percent by April 1970.

Holding was judged to be a major cause of dropouts during the early stages of the program. One study of persons who dropped out during 1969 showed they spent an average of 13 weeks in holding, compared to 6 weeks for those who completed training and obtained jobs.

A related problem was the referral-enrollment process. At least part of the early buildup of participants in holding stemmed from inadequate arrangements for referral between welfare workers and the employment service. Referral procedures varied markedly from one area to another. They were most effective where professionals from the two agencies developed close informal working relationships and were able to adjust referrals made by welfare to the number that could be accommodated by the program components in operation.

Through last December a total of 210,486 persons were referred to WIN, but only 120,843 were enrolled. The discrepancy was due to a number of factors: Some of those referred failed to report to the employment service; others were found unsuitable; and still others required medical and other supportive services not immediately available.

Inflexible funding also has hampered WIN. Of the $151 million in Federal funds obligated by April 30, 1970, more than $140 million went to the States. (The rest was used for research, evaluation, and Federal administration.) Need and capacity to run WIN determined grants to the States. Distribution of money has been limited by the requirement that each State must allocate non-Federal funds or services equal to 20 percent of the total program costs. Because their own allocations were low, some States did not receive the full Federal payment to which they were entitled based on need and capacity.

During 1970 efforts were made to shift Federal funds, both within States and between States. Results were slow within some States; and shifting funds from one State to another proved nearly impossible, largely because of the 20 percent State matching requirement. In some smaller States, the legislature meets only every other year, so funds cannot be moved rapidly from one program to another or increased in a timely fashion. The problem was even more complex in States having county-administered welfare programs, for the county itself must provide the matching funds, making it difficult not only to shift resources between States but also within States.

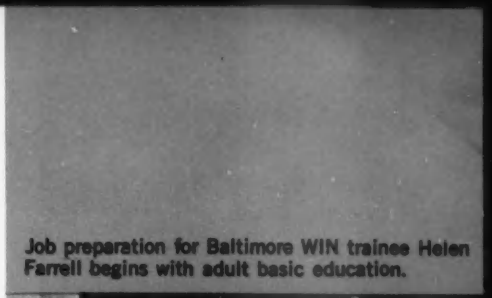
Day Care Service Crucial

Lack of child care is the most serious barrier for any employment program involving mothers. And it is one that WIN has yet to overcome, primarily because WIN legislation requires State welfare agencies to provide 25 percent of child care funds and because no Federal money for the acquisition or construction of facilities was provided.

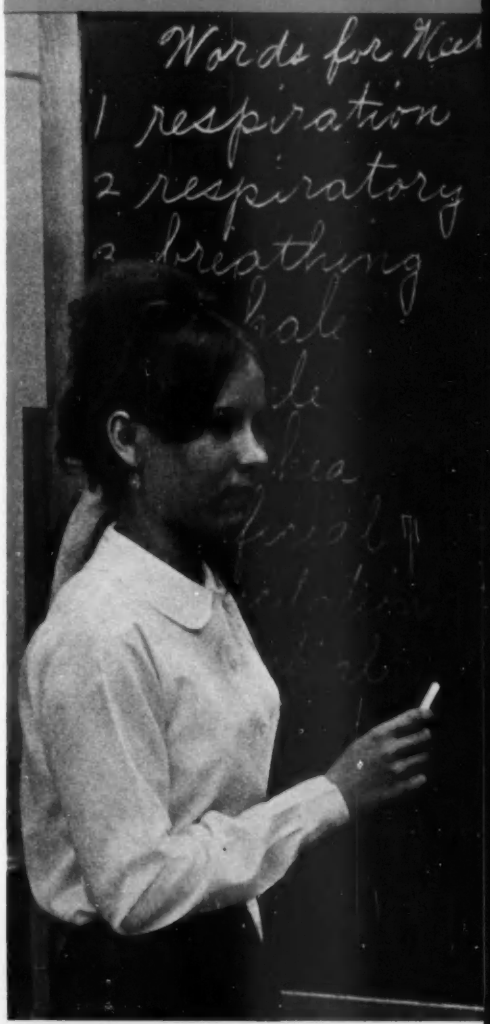
Institutional child care for WIN participants is rare, and most mothers in the program have made their own babysitting provisions. These arrangements are fragile, and subject to frequent change, interruption, and breakdown. Most programs limit participation to mothers who can make their own child care arrangements. Restrictive local building codes and fire ordinances make development of day care centers very difficult. And although many WIN enrollees are being prepared for jobs that require shift work, child care arrangements to fit such schedules usually are unavailable.

The child care problem will become more acute after WIN completes its first phase, during which enrollment efforts have been concentrated on male heads of households. The proportion of enrollees who are women heads of households will continue to rise. Day care is essential to make them available for training and employment.

Ill health is another impediment to job training for the poor, welfare case workers report. Alcoholism, obesity, dizziness,



Job preparation for Baltimore WIN trainee Helen Farrell begins with adult basic education.



Orientation for Baltimore participants like young Daniel Whitcomb includes group discussion of current events.

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Instructor Sandra Grady works with a student in the advanced typing class of the Washington, D.C., program.

Wallace Wilson (left), who got his job at the Westinghouse heavy industrial equipment repair plant in Baltimore through WIN, confers with his supervisor on repair of a rolling mill motor field frame.

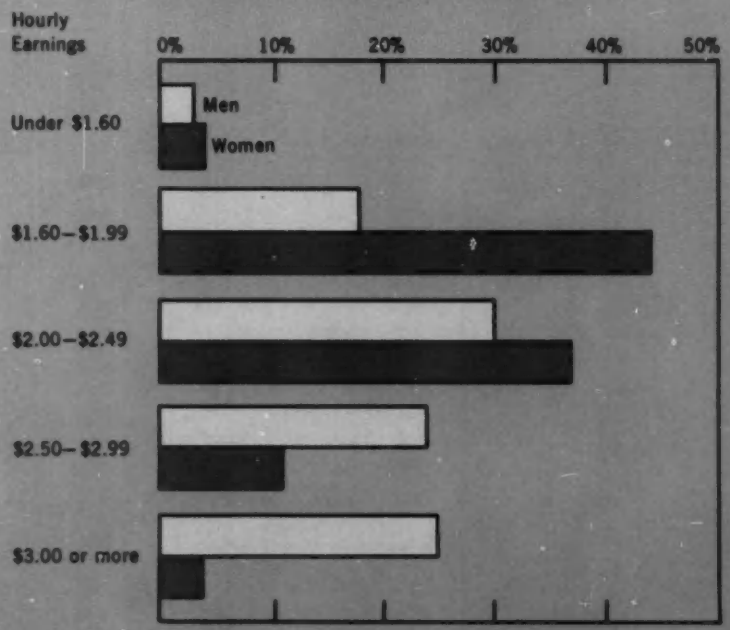
Classroom study to prepare for a high school equivalency examination is part of the program for these participants in Prince Georges County, Md.

WIN training led Delores Daniels to a data processing job at United States Civil Service Commission headquarters in Washington, D.C.

WIN ENROLLMENT BY MAJOR PROGRAM COMPONENT
As of April 30, 1970

COMPONENT	ENROLLMENT
Total	**89,445**
Intake and assessment phase	7,096
Orientation	5,890
Exploration by job tryouts and work sample methods	627
Basic education and general educational development	19,450
Other prevocational training	3,986
WIN institutional training	17,899
In other manpower training programs	4,523
Other vocational training	1,002
Holding between program components	15,053
WIN on-the-job training	661
Special work program	976
At work and receiving intensive followup services	1,872
At work and receiving regular followup services	10,410

Hourly Earnings of Men and Women WIN Graduates Six Selected States, December 31, 1969[1]



[1] Based on 5,263 graduates in followup status in California, Colorado, Illinois, New York, Pennsylvania, and Washington.

hernias, chronic exhaustion, back trouble, and frequent headaches are the usual complaints. Many poor people also are hampered in getting and keeping jobs by emotional problems such as feelings of personal inadequacy, despondency, withdrawal, and general difficulty in relating to others.

Though WIN guidelines call for medical examinations, they are difficult to arrange and in many areas are not given. Even where they are adequate, there often are no provisions for correcting the medical problems that are barriers to employment. One reason is that many States are unable to meet the Federal requirement that States raise 25 percent of matching money for medical programs.

Credentials Barrier Cited

Other factors that have hampered WIN:

- Civil Service procedures. With their emphasis on seniority and credentials, State merit systems often give preference in staffing WIN to people poorly suited to work with the disadvantaged. For example, qualifications for counselor jobs in most States require a college degree with credits in a behavioral science. Such an academic background, however, does not assure that the graduate will be able to handle vocational problems, work with minority applicants, and understand the life style and outlook of the poor.
- Communication. Efforts to obtain feedback from participants on manpower problems they encountered and to establish communications between participants and program administrators are continuing.
- Job development. More recognition must be given at the beginning of employability planning to the individual needs of participants and the kinds of jobs they can do. This type of forethought will grow in importance as the process of enrolling the most employable people first exhausts the supply of those better equipped for training and work.
- Special work projects. This component of WIN authorizes agreements with public and private nonprofit agen-

cies to employ those for whom jobs cannot be found in the regular economy or who cannot benefit from training. It has been somewhat neglected because initially most States have concentrated on developing programs for people who were employable or trainable. Another roadblock is that the plan for financing special work projects is extremely complex, involving transfers of funds between agencies, and in some cases the use of State money. Many State laws forbid transferring funds from one public agency to another, and many State agencies do not have the money to fund their share of the program.

Now that WIN is underway in all but one State, and many of the start-up problems have been resolved, efforts in fiscal 1971 will stress enlarging and improving the program. Increases are planned for all components of WIN. The goal is a rise of more than 50 percent in enrollment. Major expansions are foreseen in institutional training, employability planning, job development, and followup.

Enrollments Increased

A task force has been at work on reducing holding, improving referrals, expanding child care capabilities, and working out other program problems. The task force, created in 1969, is composed of personnel from the Departments of Labor and Health, Education, and Welfare. Visits by the task force to 27 States where enrollments were substantially below projected goals are credited with helping those States boost their enrollments by almost 15,000, or more than 38 percent, between September 30, 1969 and February 28, 1970.

Policy coordination has been improved between the Labor Department and HEW. Policies that involve the operations of both agencies are developed jointly. In this way, differences are reconciled at the Federal level and one instruction goes out to the local welfare, employment service, and other offices involved in the program.

The Department of Labor is cooperating closely with HEW this fiscal year to expand supportive services to participants. HEW's enlarged child care program is expected to produce significant improvements in training operations. Better child care arrangements should reduce dropouts and increase the number of mothers who can participate.

Resources now are being shifted both within and between States. Some States or regions need more money and openings, while others could do with less. West Virginia, for example, had 7,400 openings during fiscal 1970 but enrollments never reached 4,700. Maryland is shifting resources from its rural sections to Baltimore, where the program is near full enrollment. Other States are planning similar reprograming.

With large numbers of recruits completing their training this fiscal year, placement and job development will be critical. Some progress already has been made. In January, WIN was linked with the Job Opportunities in the Business Sector (JOBS) Program to boost placements. This linkage will increase the chances of WIN participants receiving hiring preference in the JOBS Program.

More private employers are being encouraged to participate in WIN, and efforts to create public sector jobs are being stepped up. Greater use by State employment service offices of computer-generated job listings should produce more openings for participants. And job placement personnel who work with WIN participants are getting more training.

A limited expansion is projected for special work projects. In fiscal 1969, only West Virginia had such a project. By April 30, 1970, six more States added this component, but the number of jobs—60 or less in each project—was small. The Department of Labor is reviewing special work projects to determine their potential for increasing job opportunities.

Operational experience led to five major improvements in the WIN data system in May 1970 to give additional detail and more rapid access to project information. The new system simplifies reporting, gives more information on referrals and the reasons for holding, and speeds up access to data on dropouts and on individual projects. The streamlined information now available should help determine priorities and result in a more effectively administered program.

Evaluation of WIN operations is being increased substantially. Every project will be monitored quarterly to check program management, use of resources, and coordination of supportive services. Research results on particular aspects of WIN will be available soon and may help improve program design.

Relocation Emphasized

Other specific steps being taken to improve WIN this year are:

- More technical assistance is being given to seven large States.
- Relocation techniques are being emphasized, particularly in rural areas with few job openings.
- Priority is being given to the program in allocation of Federal staff resources.

Through the steps outlined above, the Department of Labor expects to achieve substantial increases in placements of welfare recipients in the current fiscal year.

It should be noted that the Administration's Family Assistance Plan was designed to ameliorate many of the problems encountered so far in WIN. In child care, for example, the present 25 percent fund matching requirement for the States would be eliminated. Funding would be 100 percent Federal.

Trainees would be permitted to keep more of their earnings. Federal assistance for training, now limited to 80 percent, would be raised to 90 percent. The Labor Department would be permitted to make payments directly to participants to cover their training costs; at present, these expenses are taken into account by welfare agencies in determining need.

Under the Family Assistance Plan, every adult, able-bodied member of a family receiving benefits would be required to register for work or training, rather than those deemed "appropriate" by welfare agencies. □

Mine Mechanics Dig Their Prospects

By PHYLLIS E. LEHMANN

Times had been tough for the 49-year-old father of eight. During the Depression, he had been forced to drop out of school in the ninth grade and go to work to support his family. All his life he drifted from job to job, working on farms and timberlands and swinging a pick in the coal mines of western Pennsylvania.

Hard work, however, could not make up for lack of skills. Two years ago, his yearly income was still less than $3,600. Yet today he is working steadily as a mine mechanic for Barnes and Tucker Coal Company and earning between $9,000 and $10,000 a year.

What made the difference was the year he spent in a U.S. Department of Labor Manpower Development and Training Act (MDTA) Program at Elders Ridge in Indiana County, Pa., that over the past 5 years has trained more than 200 unemployed and underemployed men as mine maintenance mechanics. The men come from towns like Blacklick, Coalport, and Nanty-Glo. About one-third have had some mining experience but always in unskilled jobs. The majority are high school graduates, but they never acquired the skills needed to find and hold a steady, well-paying job. In the past they worked on assembly lines, drove trucks, swung picks and shovels, and cut fabric in garment factories.

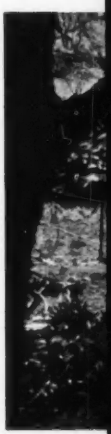
Now they hold such responsible jobs as section mechanics in the mines, where one man is in charge of four or five complex machines worth up to $500,000. If a man starts as a laborer without training, it can take him at least 3 or 4 years to move up to such a position, providing he learns the necessary skills along the way.

Two-thirds of the Elders Ridge graduates work as mechanics, the majority of them in mines. Salaries range up to $14,000 a year. More than half are earning over $8,000, and a fifth are making more than $10,000.

Since the project began in March 1965, 260 men have been admitted to five classes, and 227—or 87 percent—have graduated. A sixth class is now in training, and if past experience is any indication, their skills will be in high demand by the mining industry. Students who graduated last January received an average of 3.4 job offers. Just as employers recruit on college campuses, representatives of mining companies from West Virginia, Ohio, New York, and Utah, as well as Pennsylvania, come to Elders Ridge to interview and hire the trainees. The companies represent the big names in mining — Consolidated Coal, North America Coal, Barnes and Tucker Coal, Morton Salt, International Salt, Bethlehem Mines, to name a few.

Contrary to popular opinion, the mining industry is booming. In fact, the only thing obsolete about coal mining is unskilled labor. Men with picks and shovels have been replaced by mechanical monsters known as continuous miners and long wall miners that dig out and load the coal in one operation. Similar techniques are used in salt and ore mining. Highly skilled men, especially those who can understand and repair the sophisticated machinery, are in great demand throughout the mining industry.

"The miner today is a skilled artisan," maintains Dr. Robert Stefanko of Penn State University's Department of Mining. "There is no lack of available peo-



Mrs. Lehmann is a member of the public information staff at Penn State University.

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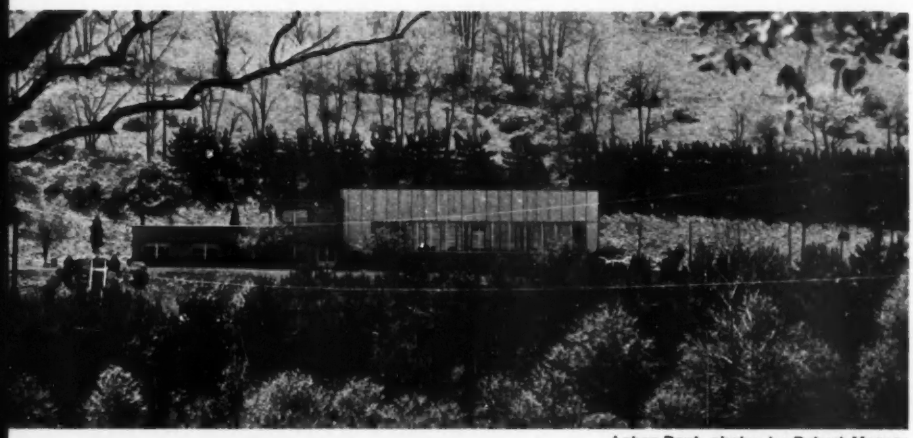


Labor Dept. photos by Robert Moeser

ple. In fact, there are many unemployed in the mining areas, but most of them simply don't have the high level of skills needed in today's mines."

It is the goal of the Elders Ridge program to help solve an industry problem and a people problem by making skilled artisans of the unemployed and underemployed.

It all started back in the early sixties when the shortage of skilled mine mechanics was becoming critical. The coal companies of western Pennsylvania and the Federal Government had determined that it would benefit the sagging economy of the area to construct "mine mouth" generating plants which would use the ready source of coal to supply electricity to the metropolitan centers along the eastern seaboard.

The coal and power companies cooperated to develop special lines for transmitting energy over long distances. The railroad companies devised methods for loading and unloading in a half day the same amount of coal that had previously required 3 to 4 days' work. Today, five power plants in the Chestnut Ridge Energy Center, which comprises some 4,000 square miles of coal reserves in western Pennsylvania, supply electricity for 20 million people in the Eastern United States.

To produce the tremendous amounts of coal needed by these operations, the coal companies looked more and more to mechanization and, of course, to skilled labor. The Elders Ridge project was initiated in 1963 by the Pennsylvania Bureau of Employment Security (PBES) and the Central Pennsylvania Coal Producers Association. The PBES contacted Penn State to help plan a training course and to request Federal Government funds for what was to become the Elders Ridge Mine Maintenance Mechanic Program.

The Elders Ridge training facility is housed in three buildings tucked away in the remote, coal-rich hills of Pennsylvania about 50 miles east of Pittsburgh. It is the kind of place where, as someone remarked, "you're not likely to go unless you want to become a mine maintenance mechanic." In hunting season, a sharpshooter can pick off a deer on a nearby hill. A family of ducks on a neighboring pond and a few stray cats and friendly rabbits help keep the trainees and staff company.

The main building houses classrooms, offices, a library, and a shop that accommodates such large pieces of equipment as continuous miners, cutting machines, and shuttle cars. The two smaller buildings provide facilities for welding classes, equipment repair, and training in practical and theoretical electronics.

On a tour of the electrical shop, instructor-administrator Ed Hayduc points to a complicated-looking piece of machinery on the floor and says, "That's

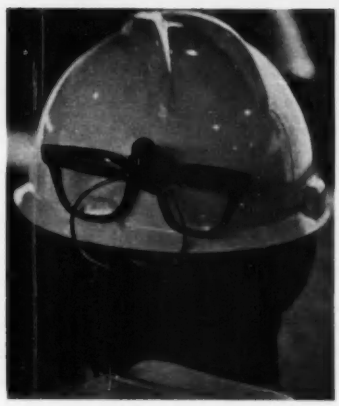
Mine Mechanics *continued*

the electrical system from a scrapped shuttle car. We just cannibalized the car and used the system. In fact, we've scrounged just about everything we've got."

This kind of resourcefulness and ingenuity have characterized the Elders Ridge staff from the day in 1964 when they had only the bare buildings, a former research plant donated by a mining equipment manufacturer. Marcus Davis, the project's first coordinator and now assistant to the director of Continuing Education at Penn State, said renovation was complicated by the remoteness of the area. "We had trouble getting bids on the work," Davis said, "because there simply weren't many contractors to make bids."

While the buildings were being put in shape, Penn State mining professors Joe Hunt and Robert Hewes, coordinators of the academic program for the project, were scouring the area for equipment. Most of the large machines, thought to be beyond repair, were donated by area coal companies. Smaller tools and equipment were purchased with MDTA funds.

More than a hundred men were recruited for the fledgling program, and 80 were selected for the first class. "We started in winter," Davis recalled, "with a very good air-conditioning system and a broken down heating system. And, the roof leaked." The "scrounged" equipment needed a lot of work. Despite these obstacles, 68 members of the pioneer class graduated, and 60 percent obtained jobs in mining or related industries.



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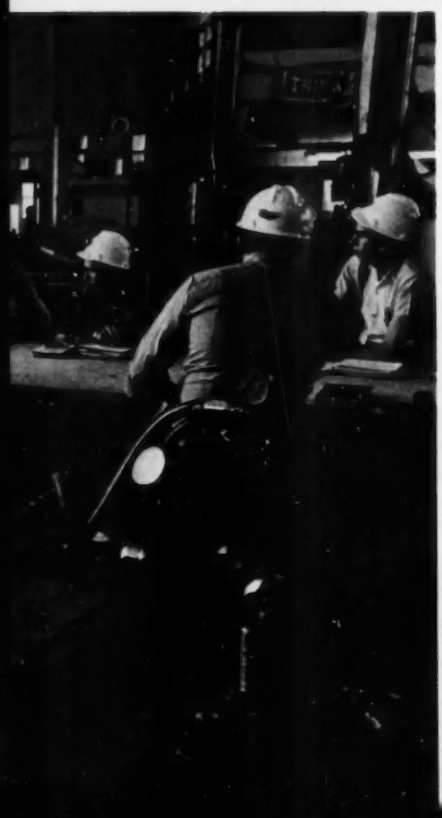
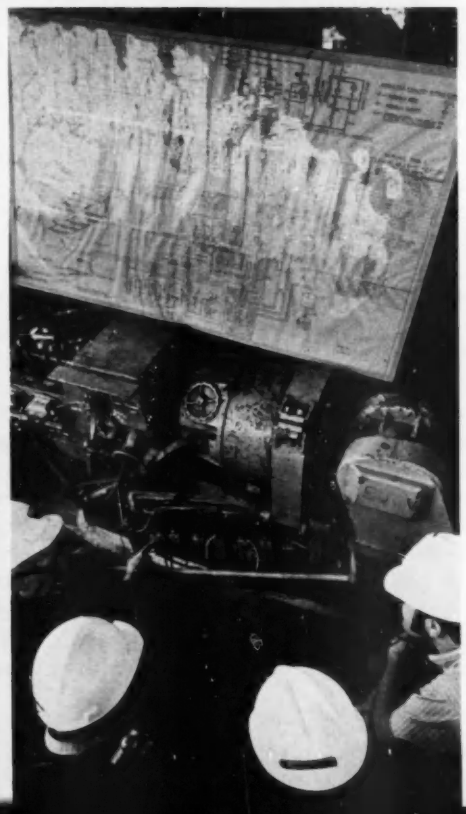




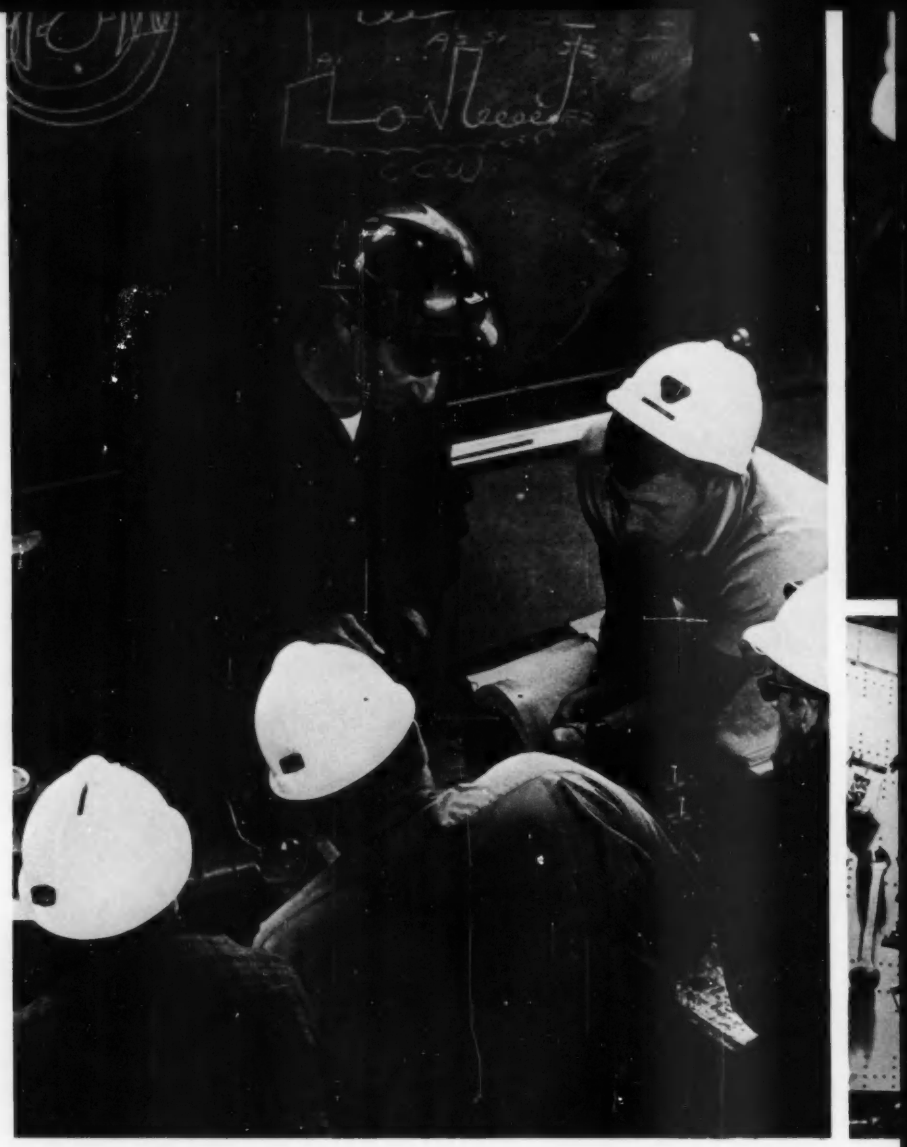
Subsequent classes were narrowed to 60 trainees, so each man could receive more individual attention from instructors and more individual practice on the equipment.

Recruitment for the project is handled by the PBES. Those selected must be unemployed or underemployed and living at or below the poverty level. The disadvantaged — school dropouts, minority group members, people with a history of welfare—also are sought out. "We're trying to reach those who can't help themselves," said Martin Dulansey, assistant administrator for PBES District 6 which coordinates recruiting. "We want to identify those who can't compete in the working world."

Preference also is given to veterans, and this may account for the drop in average age of the trainees, which is now about 28. No age limit is imposed, however, and men ranging in age from 19 to their 50's have successfully completed training and found gainful employment.

After the State employment offices have given prospective trainees IQ and mechanical aptitude tests, members of the project staff and the employment referral officers discuss each man's qualifications and select those with the highest potential for success in the program. Because of the technical nature of the classroom material, the committee looks for high school graduates, although this is by no means a hard and fast rule.

"Some high school graduates come into the project and can't do fractions," noted Professor Hewes, "so a high school diploma doesn't necessarily mean much. If



Mine Mechanics *continued*

he has a reasonable IQ, we have no compunction about accepting an eighth grade dropout." Bearing out the soundness of this approach is the record of one ninth grade dropout who attained A's and B's in all his courses and graduated near the top of his class.

During their 44 weeks of training, which is divided into four terms, the men spend half their time in practice on the machinery and half in classroom work concentrating on such subjects as electrical and hydraulic theory, mathematics, engineering drawing, and mining law practices.

Orientation is particularly important for new recruits. "Many of these fellows have never seen the inside of a coal mine," Hewes said, "so we have to start with the ABC's of mining, beginning with 'what is coal.'" Later field trips to local mines are scheduled to initiate the men to the underground life many will choose.

Hayduc, a former industrial arts teacher who serves as part-time administrator and part-time instructor, runs a tight ship. Each new trainee is issued a hard hat, goggles, and steel-toed shoes and taught their importance. An unauthorized absence results in the student's losing his training allowance for the day or days involved. If the driver of a car must be absent, his riders are expected to find other transportation to the project.

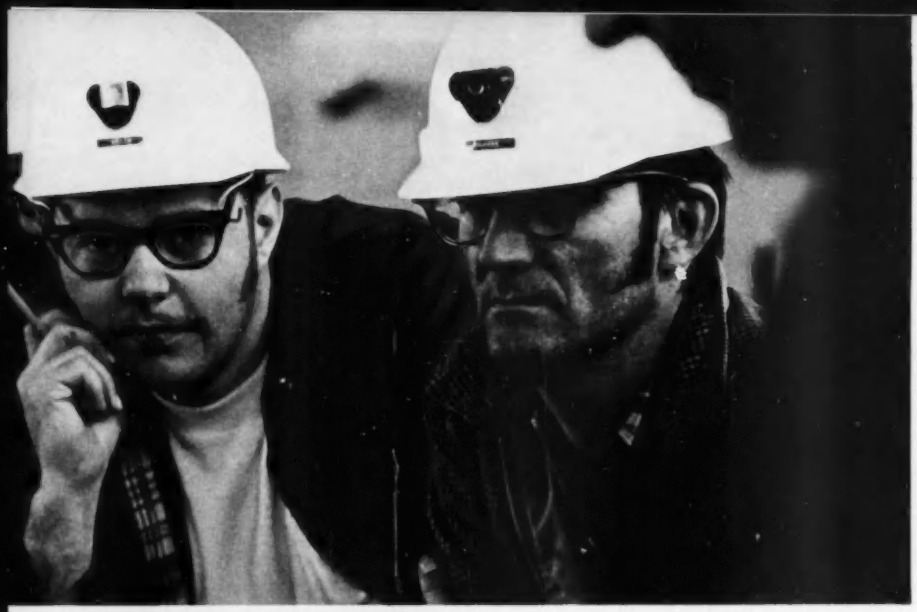
While the men are expected to maintain passing grades in their classroom work, few are dropped from the project against their will for academic reasons. "We let the men work up to the level of which they are capable," Hayduc explained. "Even if they cannot go beyond welding, at least they've learned a skill which can help them get a job."

In addition to Hewes, Hunt, and Hayduc, there are four other instructors. Three are veterans of the mines and have long experience in mine maintenance work. The other is a college-trained engineer.

A counselor from the PBES office in Indiana visits Elders Ridge 1 or 2 days a week to handle special student problems. Sometimes it may be a matter of figuring a way to spur a student who is slacking off at school. The staff laughs about one incident where a trainee was skipping school in favor of the poolroom in a nearby town. One call to his wife, and the man not only appeared every day, he also kept a careful record of his homework to prove his truancy had stopped.

The trainees are, for the most part, a determined lot. Some travel as far as 100 miles a day to participate in the project, which runs from 8:30 a.m. to 3:30 p.m. 5 days a week. For most of them, the results are worth it. An important benefit of the training at Elders Ridge is that it paves the way to jobs not only in all kinds of mining, but also in any heavy industry where sophisticated machinery must be maintained. As instructor Frank Valla puts it: "A hydraulics system is a hydraulics system, and an electrical system is an electrical system. Once they get the basics, they can apply them to many kinds of machines."

One graduate, for example, got as far away from mining as he could, taking a $10,000 a year maintenance job for Walt Disney Productions in Anaheim, Calif.



Others stay in the mining industry but in such jobs as equipment demonstrators for mining manufacturers, drawing salaries of $12,000 and $13,000 a year.

For four trainees, going back to school awakened a desire for something more—a college degree. Two are now attending Penn State, and two are enrolled in Indiana University of Pennsylvania, about 20 miles from Elders Ridge. Responding to a questionnaire about the effects of his training, one graduate wrote: "When I notified my employers of my intention to enter college, they offered to pay my tuition, plus salary, at Penn State (this should, in and of itself, speak for your program)."

Noting that he could be making about $10,000 in the mines but had decided to become a teacher, he continued: "Due to the fact that your program opened my eyes to all the new horizons available to me, I decided instead to pursue my present course of studies. But I wish to emphasize that the most important factor leading to my present status was the influence of the mine mechanics program."

Elders Ridge graduates should continue to be popular with employers because the future looks bright for the mining industry and men who can meet its skill demands. "Demand for all mineral products will increase as long as we're a consuming nation," Penn State's Dr. Stefanko points out. The United States has large deposits of iron ore, copper, zinc, lead, silver, uranium, and enough bituminous coal to last for at least 500 years. Pennsylvania alone, Dr. Stefanko said, has some 28 billion tons of soft coal remaining in the ground.

The coal industry slumped badly during the recession of the mid-1950's, but now it is approaching its post-World War II peak of 631 million tons produced nationally in a single year. Annual production is expected to reach 800 million tons by 1980.

Dr. Stefanko said electrical utilities are using about half of all the bituminous coal produced. And although there is still plenty of coal in the ground, the power companies use it so fast keeping them supplied is a problem. Some of the huge power plants in western Pennsylvania have less than 10 days' surplus of coal. It is possible that nuclear energy may partially replace coal as a power source, but then coal may be used in the manufacture of gas and oil products. Coal's possibilities are practically endless. Already it is used to produce such unlikely items as lipstick, perfume, and nylon stockings. "Many people," said Dr. Stefanko, "feel coal is too valuable to burn."

As a result of the current boom, other mining States such as West Virginia and Ohio are looking to Elders Ridge for ideas in launching training programs of their own. One similar effort already is underway in West Virginia.

In Pennsylvania, the bituminous industry predicts a need for more than 200 new mine maintenance mechanics each year in the next decade. Among the men who will help meet that need are the young trainees at Elders Ridge like John Blososky, Ed Alexander, and Mike Fisanick, who travel 80 miles or more a day to get a new start in life. Blososky and Alexander worked in garment factories, and Fisanick has had "about 20 jobs" ranging from factory work to lining up tank cars. They are not necessarily sold on mining yet; they may decide to become electricians or skilled workers in heavy equipment. The important thing is that doors which once seemed closed forever are opening now. As Blososky said, "It's too early to make definite plans. I'll have to see what is available to me when I graduate from the program."

To reach that end, he and his fellow trainees, will accept the isolation of Elders Ridge and even the long drive for 44 weeks. They do have one gripe, however. "What we really need around here," complained Blososky, "is some girls. Even one female secretary would help!" □

a dropout fights back

In America, a noted writer once said, there are no second chances.

Mrs. Mary Arellano of Pueblo, Colo., would disagree. She had her second chance, and made the best of it, after dropping out of school, raising a family, and becoming a grandmother.

The payoff came last September when she answered her telephone. A friendly voice on the other end of the line said, "If you are available to go to work, Mrs. Arellano, we would like to see you first thing Monday morning."

At the age of 45, the small, Mexican American mother of 12 children (10 still living, 5 still at home) and grandmother of 14, had reached her goal. The Colorado State Mental Hospital in Pueblo had hired her as a licensed psychiatric technician.

A good starting point for her story is the time 7 years ago when she first applied for work at the State hospital. She was turned down and told Civil Service rules required her to have a high school diploma or its equivalent—a General Educational Development (GED) certificate—to qualify for any job there, even as a dishwasher.

This was a jolt. She had never before been confronted with an educational barrier in applying for work. But then she had always had low-paying jobs such as dishwasher, potato sorter, and maid.

She now realized the consequences of dropping out of school before finishing the seventh grade to marry and raise a family. Unless she did something, and quickly, she might be forever barred from good jobs and would find any kind of work more and more difficult to get.

"But how am I going to get a diploma at my age and with my poor education?" she asked herself as she left the personnel office, fighting back the tears and frustration. During the years that followed, as she scrubbed floors, made beds, and washed dishes at $1 an hour at a local motel, she often thought about getting a GED. But it seemed so hopeless.

"I kept looking at my kids. We needed a better home, more food and clothes, and money so they could get a good education. My husband's take-home pay ($300 a month) wasn't enough, even with what I earned."

Finally, Mrs. Arellano made up her mind to get the GED regardless of the obstacles, and in March 1966 she went to the State employment office in Pueblo for help. "It turned out to be the best thing I could have done because I met Mrs. Catherine Fredrickson (an employment interviewer) and she gave me the information and encouragement I needed.

"When I told her I wanted to work at the State hospital but lacked the education, she told me how I could get a GED by going to night school and then perhaps take a course to learn to be a psychiatric aide. I had never heard of such a job, but somehow I knew it was exactly what I wanted."

Mrs. Arellano enrolled in a 1-year GED preparation course sponsored by the local community action agency, and attended classes 2 nights a week. From 6 to 9 p.m. she studied such subjects as math, English, reading, and spelling. Many times she would walk the mile to and from classes to save money. She completed the course, passed the GED exam, and returned to the employment office to see Mrs. Fredrickson.

"She was very confident and very determined to succeed," said Mrs. Fredrickson. "We tested her and found she met the occupational aptitude pattern for psychiatric technician. Then I gave her some tips on applying for a job, conducting herself during an interview, and personal appearance, and referred her to the State hospital interviewing board.

The hospital had a program that seemed made to order for Mrs. Arellano. It was a 9-month training course for psychiatric technicians, being conducted in cooperation with Southern Colorado State College. "Because of Mrs. Arellano's educa-

tional background, the board was somewhat skeptical," said Mrs. Fredrickson, but she was accepted.

Mrs. Arellano enrolled in the 5-days-a-week course at the college in August 1968. She received a $155 monthly training allowance from the hospital, out of which she paid the $354 tuition on a monthly installment plan worked out with the college. Her mother lent her $70 to buy books and materials.

"It was very hard at first," she said. "I had to learn words like 'geriatrics' and 'encephalogram.' I could hardly say them much less spell them or know what they meant. We had to study English, reading, psychology, and other subjects. The tests were especially hard."

She attended classes at the college every morning and 2 nights a week, and trained on the job at the hospital every afternoon. Throughout the 9 months, she kept house and took care of her family. She did her homework at night alongside her school-age children.

Her grades for the first quarter were somewhat disappointing and she feared being dropped from the class, as had several students. But her instructor assured her only one of her grades was seriously low and with a little more effort she could improve it during the next quarter.

"I cried for joy and relief," she recalled. "About halfway through the course, though, I became very discouraged. But one of my classmates whom I'll never forget told me if I needed some help to call her. 'I know you can make it, Mary,' she said. I wasn't afraid anymore after that."

In June 1969 Mrs. Arellano was among 26 women, most of them far younger than she, who graduated. She still had one more hurdle. Colorado law requires a psychiatric technician to pass a written 175-question exam to qualify for a license. The fee is $30. She caught the bus to Denver, took the exam, and returned to Pueblo to await results. Meanwhile, she took a dishwashing job at a downtown Pueblo restaurant.

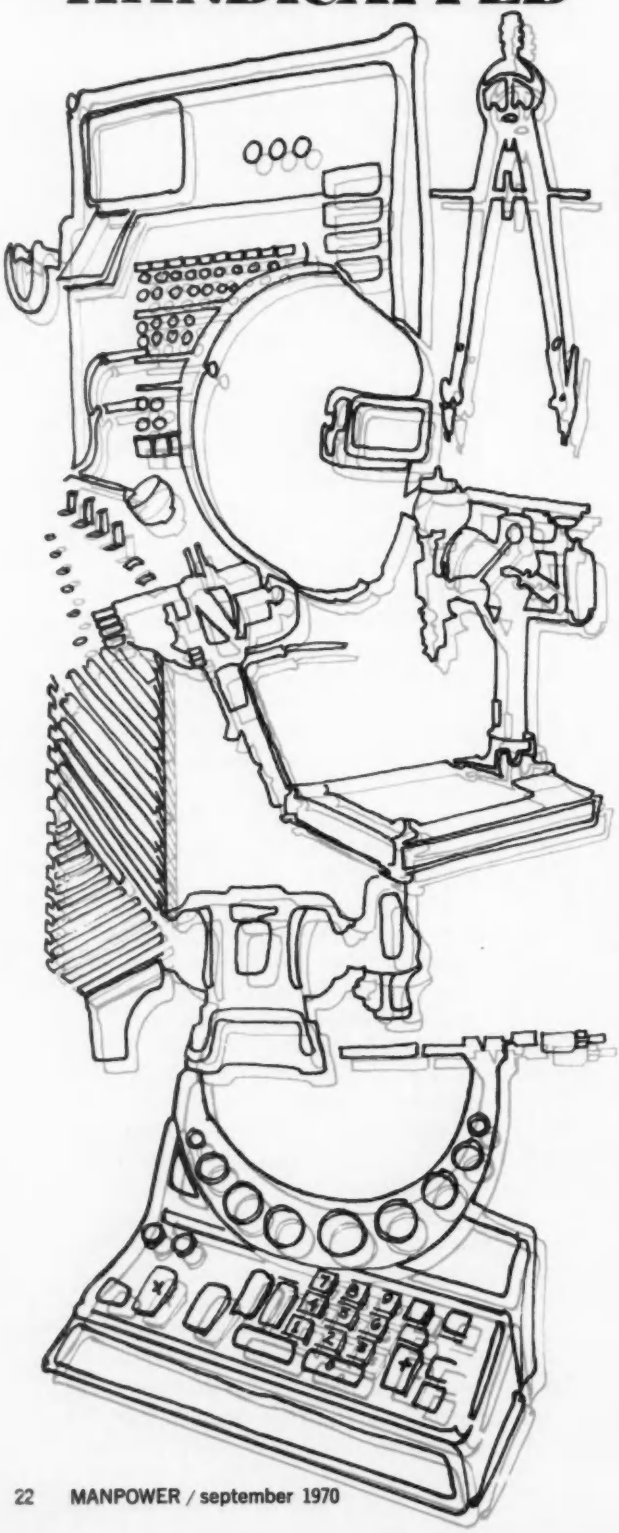
"I was tickled pink when I got a letter in a couple of weeks telling me I had passed with a high mark and was now a licensed psychiatric technician, eligible to work anywhere in Colorado. All I wanted was to be accepted by the State hospital, and I never gave up hope that I would be."

Mrs. Arellano now works in the State hospital's geriatrics division, assisting elderly male patients in a variety of ways, under the direction of nursing and medical staff. Her salary is $367 a month and will increase 5 percent a year to a maximum of $469.

Though she is on the difficult 11 p.m. to 7 a.m. "graveyard shift," she "loves" her job. "I like to work with old people," she said. "I think I've done pretty good. I like my work and the people I work with are good."

The people at the Pueblo office of the Colorado Division of Employment think Mary Arellano is pretty good too. Their word for her is "valiant." □

IMPROVING JOB SERVICES FOR THE HANDICAPPED



Many handicapped persons find that the effects of poverty—and not their physical or mental disabilities—are the greatest obstacles in their search for work. Their chief hurdles are a weak education, little or no job training, and limited opportunities for work experience. The combination of a physical or mental handicap and inadequate job qualifications is not unusual because the poor in America have both the least education and vocational training and the highest rate of physical and mental impairment.

These are among the findings of a study[1] prepared for the U.S. Department of Labor's Manpower Administration by Greenleigh Associates, a private management consulting firm. The study explores characteristics of handicapped people who are potentially employable but lack vocational skills. To meet the vocational needs of the handicapped, the study proposes a detailed model program of employment services for them.

A number of public and private agencies help the handicapped. Some provide specialized aid such as prosthetic devices, psychiatric service, speech therapy, and the like. Others offer somewhat broader assistance leading toward competitive employment but, according to the Greenleigh report, these agencies generally have funds to help only a small percentage of the disabled. Links with programs serving a wider clientele, such as manpower training and employment services, were found to be weak.

"There is no rationalized, systematic means of providing the disabled individual with the requisite medical, social, and financial services to enable him to attain satisfactory employment," the report says. "There are no consistent patterns of interaction among agencies and no clearly defined areas of responsibility; most agen-

[1] *A Study to Develop a Model for Employment Services for the Handicapped*, by Greenleigh Associates, Inc., is available from the Clearinghouse for Federal Scientific and Technical Information, Springfield, Va., 22151, for $3 for a paper copy and 65 cents for microfiche (specify accession number PB 186151).

cies are able to select and reject potential clients on grounds that are more related to the agencies' needs than to those of the clients. Those agencies which do not have the ability to formally reject applicants usually do not have the capability or resources for serving them; they can register the name in their rolls but can provide little in the way of constructive services. Thus, there is no agency which clearly has to take responsibility for the most critical cases."

Research for the Greenleigh report included an analysis of statistical data and published source material, study of case data on the handicapped and hard-core poor in Los Angeles and Atlanta, in-depth interviews with handicapped poor persons, and observation and interviews in Tacoma, Wash., and Baltimore. The latter cities were selected for field study because they are of moderate size, have variety in industry and population, and had relatively tight labor markets where there was a greater likelihood of employment opportunities for the handicapped than in labor surplus areas.

To handle the multitudinous job problems of the handicapped, the Greenleigh report recommends better use of a wide variety of existing public and private agencies rather than creation of a new agency.

"A tremendous network already exists: the U.S. Training and Employment Service, the Social and Rehabilitation Service and the State Vocational Rehabilitation Departments, the Veterans Administration, the Social Security Administration, the President's Committee on Employment of the Handicapped, the Civil Service Commission, as well as numerous private agencies and institutions."

The major administrative requirement, according to the report, is for an improved system of linkages among agencies. It proposes use of multiagency neighborhood centers, noting that experiments with the multiagency center approach for social services indicate they are effective in reaching more people who need help. But the report contends that existing centers are inadequate to meet the needs of the handicapped because they often lack Social Security and Workmen's Compensation offices and representatives of most health and medical agencies. Present centers also concentrate on intake and referral rather than dispensing services, the report says.

The multiagency centers proposed in the report would offer diagnostic, evaluation, counseling, and job placement services, plus many of the medical, dental, and mental health services that may be required before employment.

For persons needing extensive help from a number of agencies, the study proposes that case managers be used to guide the handicapped through the referral process, intercede for them when necessary, and keep track of the help they get and the help they need.

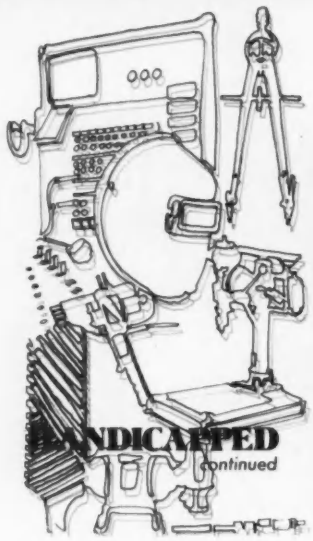
Job Training Held Crucial

Greatly increased job training opportunities for the handicapped are crucial if such efforts are to be effective, the study says. It maintains that aside from training sources underwritten by State departments of vocational rehabilitation, there are almost no programs training the handicapped in useful job skills. Moreover, researchers found that vocational rehabilitation programs reach only a small percentage of the handicapped, generally the "most feasibie cases."

"Certain sheltered workshops provide training of various degrees of sophistication," the report says, "however, almost invariably this training is for specific tasks to be performed in the workshop. It is not preparation for outside employment, nor does it equip individuals with a trade or occupational skill.

"Publicly financed manpower training programs were not a resource for training of the handicapped in the cities surveyed."

The proposed model of employment services would change these directions.



It would operate on the central premise that the handicapped must be equipped with useful job skills if they are to become competitive in the labor market and capable of making a decent income. Skill training would be offered to every handicapped person who needs it and has potential for making productive use of it. The proposed program would include:

- Stipends for training. The needy handicapped at present, it was found, are generally dependent on public assistance while they complete rehabilitation programs. The report recommends that training stipends similar to those in other manpower training programs be offered.
- Reservation of slots for the mentally and physically handicapped in publicly sponsored manpower training programs so that the handicapped will not be screened out of such programs when in competition with other needy, but nonhandicapped, persons.
- Flexible program designs to allow the handicapped to proceed at their own pace.
- Use of sheltered workshops primarily for work evaluation, work adjustment, and pre-employment training. Wage subsidies are recommended to assure that workers are adequately paid. Federal funds probably would be needed to build and equip workshops, the study says.

Researchers found little argument with the idea that the handicapped can become productive. Surveys of employers showed that they were overwhelmingly concerned with a worker's competence rather than with the existence of a handicap. A common response was that if handicapped persons were qualified or trained for a particular task they could be hired. Interviews with staff in sheltered workshops showed that they thought almost all their clients could produce at competitive levels, or be rehabilitated to do so, if there were no artificial barriers to their employment in the economy such as prejudice and employer misconceptions.

The report acknowledges that implementation of the proposed employment services for the handicapped would be a costly undertaking. But it could be argued, the report asserts, that the cost of such services would be more than offset by increased production and self-support by the handicapped.

Specific Data Unavailable

National data on the handicapped, the study points out, are not specific on employment needs. Researchers could only surmise the number of handicapped persons who need special employment services. A 1966 Social Security Administration survey showed nearly 18 million disabled adults who were not in institutions. Of these, 6.1 million were severely disabled and could not work regularly (although one-fifth of them either were working or looking for work at the time of the study); 5 million could not do the work they had done before disablement; and 6.6 million were limited in the kind or amount of work they could do. Ruling out people who are too severely disabled to work, who might prefer to stay home, or who are likely to be now working at the top of their abilities, the Greenleigh study arrives at a somewhat arbitrary figure of 2.2 million handicapped persons for whom manpower services are crucial.

Another guidepost to the extent of the need for employment services for the handicapped is the extent of impairment in certain groups, such as minorities, where there are already heavy burdens of economic and social disadvantage. The Greenleigh study reports that:

- Race was closely related to handicaps in the Social Security survey. Only a sixth of the white adults in the survey sample, compared to a fourth of those in other races, were disabled, and the latter group had twice the white rate of severe disablement.
- Age was an important factor, the survey showed. The rate of disability for the total population in the 18-34 age group was 7.8 percent; in the 55-64 age group it was 36.2 percent. Severity of impairment also went up with age.
- A Maryland planning agency survey found that households without telephones, presumably occupied by the poor, held about 33 percent of all seriously disabled persons even though only 12 percent of all homes did not have telephones.
- A demonstration project in eight Los Angeles poverty areas open to all the disadvantaged, whether or not they had physical or mental disabilities, found that more than half of nearly 19,000 applicants were handicapped. Most applicants were male heads of families and nearly a third had more than one impairment; education levels were low; 88 percent were unemployed.

In cities where agency professionals and employers were interviewed, there was agreement that the greatest barriers to employment of the handicapped are low education, lack of skills and work history, court convictions, alcoholism, and deviant behavior rather than physical and mental impairment.

Agency staffs also noted that long-term neglect has worsened the condition

of large numbers of people and added to their difficulties in getting employment. They report that many handicapped people are now being "discovered" although they have been disabled since childhood and have been known for many years to school systems, clinics, and social agencies. No rehabilitation action was taken and they never were able to qualify for employment. The longer they go without help, the more problems they have in getting a job.

By contrast, agency workers say, persons who sustain an injury or chronic illness during their adult years—after they have completed school, learned skills, and built good work records—usually can be reemployed with little special help. But this group, too, suffers from neglect, they point out. Future work patterns are determined shortly after disablement. So are patterns of failure. When people acquire handicaps and are then out of work for more than a few months, they go downhill emotionally and physically, become increasingly dependent, and have less and less chance to get satisfactory employment.

Although there is recognition that the handicapped need help to get and hold jobs, the report charges that the disabled who need help the most are least likely to get it. Researchers blame this on pressures arising from inadequate funding. "In the interests of their own survival and growth, agencies are induced to select those applicants who promise the greatest likelihood of success for the least expenditure of resources."

Poor referral methods among agencies compound such problems. In the cities surveyed most referrals were made simply by sending clients, sometimes accompanied by referral forms, to other agencies. If these individuals failed to follow through by themselves in seeking help, referring agencies had no way of knowing what happened to them and the people usually dropped out of "the system." Moreover, some agencies were making excessive referrals simply to clear their books of cases which they lacked the capability or resources to serve.

The model employment program set forth in the Greenleigh study calls for services to concentrate on the handicapped who also lack adequate job preparation, the mentally ill and mentally restored, the mentally retarded, and the severely and multiply handicapped. These groups have the greatest employment problems and are now getting the least help. Excluded from the target population are handicapped persons who are too incapacitated to work and those with enough skills and education so that they have no serious employment barriers.

Potential in Public Agencies

Efforts to place the disabled in meaningful jobs must begin with imaginative job analysis and development, the study says. It finds that the most successful efforts at creating job opportunities for the handicapped are those which first identify labor shortages that these persons can be trained to fill.

"In particular there are unmet needs in service and clerical occupations, and these fields appear to offer considerable potential for employment of the disabled," the study says. "A majority of the employers interviewed were unaware of the kinds of jobs which could be handled by people with various handicaps and believed that this kind of identification was the most important prerequisite in promoting jobs for the handicapped."

There is also great potential for the handicapped in public agencies, the study found. It reports that these agencies have extensive labor shortages and their need for workers is likely to expand. But if such jobs are to be opened to the handicapped, a number of barriers first must be removed.

"Although there are significant and innovative programs to promote public employment of the handicapped by the Federal Government, there are not comparable undertakings at State and local levels," the report notes. "In fact, many of these jurisdictions continue to have regulations, policies, and practices which prohibit or militate against employing the handicapped."

Poor knowledge of the labor market in cities studied by the Greenleigh researchers was pinpointed as "the most deficient area in the entire complex of employment" services needed by the handicapped. Present analytic methods, the study says, are inadequate either for day-to-day operations or for planning future programs. At best, the study reports, conclusions about the labor market trends are based on knowledge of about 20 percent of the employers in an area. One local placement official told researchers:

"We know twice as much as we need to know about the clients and nothing at all about possible jobs for them."

The study recommends that local employment services be given the authority and resources to do comprehensive analyses in order to identify needs for workers and changes in employment patterns that are likely to take place. □

News & Notes

To ease a critical shortage of nurses, City University of New York is starting an experimental program this autumn to prepare policemen and firemen who are approaching retirement to become professional nurses. One hundred men will be admitted to the program when it starts this month. Another 100 will be enrolled a year from now. The recruits will participate in a program of part-time nursing studies running 2½ years. Upon completion they will receive certificates and be eligible to take the State licensing examination to become registered nurses.

* * *

The annual National Manpower Policy Task Force report is now available. It describes the third in a series of annual conferences —this one in September 1969—at which Ph.D. candidates who have dissertation grants from the Manpower Administration discuss their work with each other and with government officials involved in manpower matters. Copies of the report are available from the Clearinghouse for Federal Scientific and Technical Information, Springfield, Va., 22151 (specify accession number PB 187701) for $3 for a paper copy and 65 cents for microfiche.

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The story of Rosie the Riveter entertained Americans during World War II when women put on coveralls and replaced men who left their work benches to enter military service. Now Rosie is becoming a permanent part of the American scene. She and her sisters are working as plumbers in Rochester, operating engineers in Phoenix and Boston, shipfitters at Puget Sound, and aircraft mechanics at Newark, Ohio. About 1,800 women were in apprenticeship programs registered with the Manpower Administration in 1969, an increase of 64 percent over the previous year.

* * *

Summer shutdowns for employee vacations are growing more popular. The National Association of Purchasing Management reported that a survey of 15,000 employers showed 40 percent planned vacation shutdowns this year compared with 35 percent in 1969. Most summer shutdowns last 2 weeks and come in July or August.

The first of eight new residential support centers for disadvantaged youth was opened recently in San Francisco by the Manpower Administration. Each center will serve about 30 so-called "high-risk" youth— those who have such serious behavior problems that they are unable to participate successfully in school, vocational training, and ordinary youth programs.

* * *

About 600 members of minority groups will be trained as journeyman ironworkers under an 18-month, $1.2 million contract. The agreement was signed by the U.S. Department of Labor with the AFL-CIO iron workers union and several contractors' associations. Labor Secretary J. D. Hodgson said the agreement was an "excellent forward step in bringing into this highly paid trade persons from minority groups who have some experience in the trade but who are beyond apprenticeable age and may lack scholastic preparation." To be eligible recruits must be physically fit and at least 31 years of age. President Nixon has directed the Labor Department to expand enrollment by 50 percent in its programs providing training for construction skills.

* * *

Job Corps costs were cut in the first year the program was operated by the Labor Department. The annual average cost of services per enrollee was $6,725 for the 2 fiscal years before the Department took over the Job Corps on July 1, 1969. The Labor Department, in its first year of operations, reduced this to $6,274, down more than 6 percent. At the same time, the proportion of youngsters placed in jobs, school, or military service within 90 days of leaving the Corps rose from 77 percent in fiscal 1969 to 80 percent during the first half of fiscal 1970.

* * *

The University of Maryland has received a $103,687 Office of Economic Opportunity grant to study the economic effects of discrimination in employment. The study will focus on job discrimination against Negroes and women. It will also examine whether or how discrimination against blacks also tends to work against lower income whites.

XUM

TECHNOLOGICAL CHANGE: How Fares the Worker?

By RUTH RELYEA

The pace of technological change in the 1950's and early 1960's touched off widespread predictions that considerable unemployment and worker displacement would result. To date, the forebodings have proved unfounded. That does not mean, however, that technological change has not had a substantial impact on workers and their jobs. It has. And, according to a nationwide survey made for the U.S. Department of Labor's Manpower Administration, the overwhelming majority of workers affected by technological change benefited.

Conducted by the University of Michigan Survey Research Center, the study[1] covered 2,662 persons representative of a cross section of the labor force. Information was collected on how changes in machinery affected their jobs and working conditions over the 1962-67 period.

The survey indicated that a very large segment of the work force is directly or indirectly affected by machinery and equipment. Although affecting a relatively small number of persons in a given year, changes in machinery were substantial in their cumulative effect. Hypothetically, machine change can mean everything from the acquisition of new pencil sharpeners in an office to the complete overhaul of an industry's production equipment; from change that affects the job of one worker, to change that requires the adjustment of thousands of workers in direct and indirect contact with the machinery. The study considered only those changes which the respondent indicated had a significant impact on his job.

Of workers undergoing machine change, the large majority said they benefited as a result. Finding persons who had experienced "serious hardship" as a direct result of changes in machinery was almost impossible, the study says. And it suggests that failure to introduce machine changes may, in fact, have adverse effects on the worker.

Approximately 2 of every 3 persons responding to the survey operated machinery or equipment on the job. When applied to the total work force, this would mean that in 1969 about 56 million persons were employed in jobs requiring the operation of machinery as an important aspect of their duties. Forty-two percent of the survey sample said they operated machinery almost constantly. One-

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Mrs. Relyea is a manpower analyst in the Manpower Administration's Office of Research and Development.

[1] The full study, *Technological Advance in an Expanding Economy: Its Impact on a Cross Section of the Labor Force*, is available from the Clearinghouse for Federal Scientific and Technical Information, Springfield, Va. 22151, for $3 for a paper copy and 65 cents for microfiche (specify accession number PB 188676).

third of the sample felt that machinery which they did not operate was important to their work. For example, although installation of a computer in a chain of banks creates only a small number of new jobs, it also affects other bank employees who will not need more than a superficial knowledge of the computer operation and who may even operate other kinds of equipment.

The study estimates that during 1962-67 changes in machine technology had a significant impact on 7.5 to 10 million jobs. Twenty-two percent of the sample reported changes that altered their work to some appreciable extent, including 13 percent who experienced a machine change in connection with either a transfer within the same company or with a change of employers. But very few workers said technological change caused them to switch jobs. On the whole, workers having a machine change, regardless of whether they changed jobs, were better off than those who worked with the same technology throughout the study period (or had no contact at all with machines).

Regardless of machine use or machine change, the income of approximately 75 percent of the workers surveyed increased between 1962-67. But as a group, workers whose jobs had no significant connection with machines fared the worst. Fewer of them—69 percent—reported increased incomes, and more of them—31 percent—had no increase or a decline in income during the period studied. Workers who were affected by equipment but did not operate it fared best; 80 percent of them reported income increases. Next in line were workers who both operated equipment and were indirectly affected by equipment operated by others; 78 percent of them had increases.

"...a firm that falls behind technologically usually is put at a competitive disadvantage..."

The extent of income increase rose with the technical level of equipment used. For example, 66 percent of those operating computers and other logically controlled hardware reported promotions in the 5-year period as compared with 32 percent of those operating fixed mechanically controlled equipment—the next highest category of machine operators receiving promotions.

Machines Spur Hiring

Workers in firms which were expanding production and employment were more apt to undergo machine change than those in declining companies, leading the study to conclude that "in a majority of cases, reductions in employment due to automation of equipment are more than offset over a period of time by the growth of the firm's market." Production growth resulting from machine change may, in fact, be the basis for increased hiring.

The study points out that a firm that falls behind technologically usually is put at a competitive disadvantage and may be forced to cut hours, reduce pay, and lay off workers. This not only supports the conclusion that changes in machine technology in an expanding economy do not usually lead to adverse employment experiences, but have important implications for activities directed at combating unemployment. With the identification of technological lag as a cause of unemployment, training and upgrading resources could be better organized and directed.

Overall, 20 percent of all workers surveyed reported being out of work sometime during the 5 years. Those only indirectly affected by machines experienced the least unemployment, while those not working with any machines—directly or indirectly—had the highest rates of joblessness. Of workers who experienced machine change but stayed in the same job over the 5 years, 8 percent reported some unemployment, as contrasted with 11 percent of those who stayed in the same job and were not involved in machine changes. This would tend to show that even over a long period of time machine change does not increase unemployment.

In addition, most workers said they believed they were better off as a result of machine change with or without a job change, with respect to promotions, income, unemployment, and their workweek. Workers who switched jobs because of a machine change, however, said they saw less chance of advancement and security in their work, even though they fared about as well as other job changers. The study maintains that by practically all measures, including employment experience, income, promotions, job challenge, and satisfaction, technological advance in an expanding economy usually has positive effects for the individual and the economy.

Not to be overlooked in this optimistic picture are the study's conclusions about those instances where adverse consequences do result:

> . . . the impact of advances in machine technology on employment is largely indirect. . . . Much of the unemployment resulting from labor-saving machinery "trickles down" to the most marginal groups in the labor force. Workers who might have been hired in the absence of technological change are not needed. The last to be hired are the people with the weakest labor market qualifications for reasons of age, experience, education, health, location, race, previous employment record, and other possible handicaps. These people, together with those employed by technologically backward firms, seem to bear the bulk of technological unemployment.

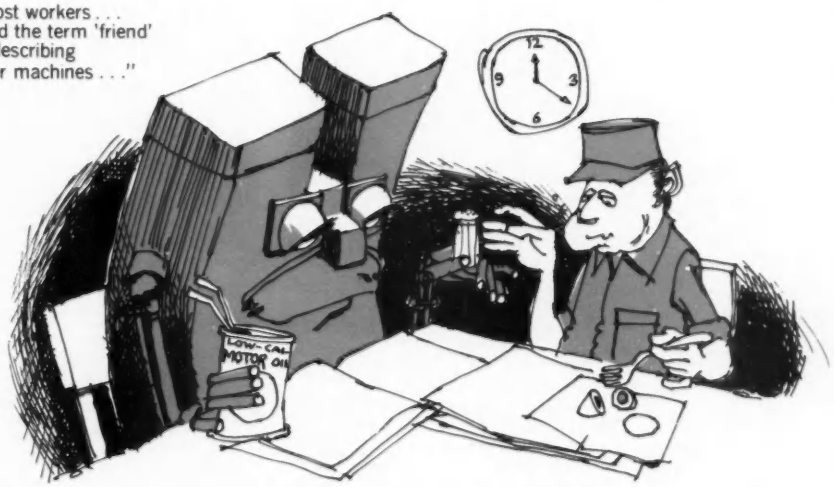
In a technologically changing situation, the worker who is at all initially inadequate to the job naturally suffers most from the introduction of machine changes

which demand different and more difficult skills from him.

The two primary cushions for adverse effects of technological change on these workers, the study points out, are the economy's ability to absorb technological unemployment through increased labor demand, and retraining and other special programs to ease the impact of technological unemployment for the marginal segments of the labor force—in effect, the two prongs of current manpower policy.

The 5-year period covered by the study was one of unusually rapid economic growth and declining unemployment. Study findings, particularly those relating to adverse effects of technological change, must be viewed in that context. Approximately 4 percent of the workers affected by changes in machinery reported some unemployment during the transition period, and another 2 percent reported a shorter workweek. This 6 percent does not take into account any unemployment occurring as an indirect consequence of machine change.

"Most workers . . . used the term 'friend' in describing their machines . . ."



The study shows that the more education a person has the more likely he is to work closely with complex and highly automated equipment. And younger workers more often operate equipment on the job than do older workers.

Contrary to the traditional association of the operation of machinery almost solely with blue-collar workers, the survey showed that machinery is an important aspect of nearly all white- and blue-collar jobs except those at the very top and bottom of the income scale. White-collar workers and skilled craftsmen, more often than unskilled and service workers, experienced machine change on the job, with operatives and laborers more often having machine change accompanied by frequent job changes. Of those experiencing machine change, about 40 percent reported being given on-the-job training, and 10 percent participated in a formal training program.

Workers at the top of the income scale usually operate no equipment, even though machinery and equipment are more likely to have a substantial indirect effect on them than on low-paid workers. The median pay of those who operate logically controlled equipment was $8,200 per year in 1966 compared to $5,200 for those operating no equipment. Of the workers surveyed who said they did not operate any equipment, 29 percent earned less than $4,000.

Most workers expressed a favorable attitude toward the machinery they operated. In fact, 73 percent of the respondents used the term "friend" in describing their machines, and workers operating automated equipment more often reported that they enjoyed their work than those working with more traditional equipment.

Young persons reported increased job satisfaction as a result of machine change more often than older workers, blue-collar workers more often than white-collar workers, and men more often than women. Overall, of all those involved in some kind of machine change, about two-thirds reported increased job satisfaction over the 5-year period. About 1 in 10 of the workers reporting machine changes, or job changes related to technological considerations, were less satisfied with their jobs. One of the chief causes of decreased job satisfaction was prolonged or intermittent periods of unemployment.

Higher income, of course, was the most important factor in producing greater job satisfaction. Other important considerations reported by workers were the chance to learn new skills, more interesting work, and opportunity for advancement. Opportunity for more skilled work and greater responsibilities for planning and judgment also were important to a worker's job satisfaction. Challenge and responsibility were far more important than job security.

New Technology by 1980

The concern for challenging work was well nigh universal, extending to young and old, more and less well educated, and blue- and white-collar workers. For example, the 59-year-old manager of a glass factory where production was increased by mechanization, reported that his greater responsibilities for planning and coordination of the cutting operation and the demand for more initiative on his part added to the interest and personal challenge of his job.

If the economic growth rate of recent years continues with a parallel pace of technological change, a complete technological turnover in the major industrial segments of the economy can occur by 1980. This would not only demand increased efforts to upgrade the skills of the work force, but also would require totally new views of work, education, technology, and leisure. Concepts such as multiple careers for the individual, interspersed with education and training throughout life, may be the rule of the future. Changing technology may be the most significant impetus for broader, more diverse, and more frequent educational and training experiences for all workers. Monotony and estrangement could be displaced by continuous challenge and learning. □

BUILDING BETTER BRIDGES

Even the mighty and famous have trouble with their teeth.

George Washington's dentures fit badly, making him appear a grim father of his country. When Winston Churchill's plates bothered him, he had to forego the big cigar and the hearty roast beef—though not the champagne—he loved. And Humphrey Bogart is said to have developed his famed screen sneer trying to work his capped teeth free from his lips, on which they often snagged.

Thirty-five disadvantaged trainees in Kansas City are learning to make better dental hardware than that. Under the tutelage of trained craftsmen and of faculty members of the Kansas City Dental School of the University of Missouri, they are studying to become expert dental laboratory technicians.

Their 1-year classroom training program will end in December. Then they will move into on-the-job training for a year. The U.S. Department of Labor is funding the project with more than $209,000 in Manpower Development and Training Act (MDTA) money.

During the classroom phase, trainees receive up to $67 a week in living allowances, depending on the size of their families. When they move into on-the-job training, they are expected to earn from $2 to $3.50 an hour. Afterwards their incomes will depend on their own abilities. The National Association of Certified Dental Laboratories estimates that trained technicians earn $4 to $5 an hour.

Certainly they are entering a trade that should welcome them with open arms. The American Dental Association estimates that 50,000 dental technicians will be needed by 1980, and predicts a shortage of 23,500 at current rates of growth.

Dental technicians normally come into the field "off the street." They are hired by dental labs and pick up their skills as best they can without formal training. These haphazard methods still account for the majority of new recruits.

But the balance is beginning to tip. In early 1965, a 4-year apprenticeship program was worked out between the U.S. Department of Labor's Bureau of Apprenticeship and Training and the National Association of Certified Dental Laboratories. By January 1970, some 1,050 registered apprentices were reported in training.

Colleges around the Nation also are developing courses for dental technicians. By January 1970, 23 colleges were offering courses ranging from 6 months to 24 months. The number entering the trade by this route increased from 95 in 1960 to 360 in 1969.

Most of the MDTA students at the University of Missouri-Kansas City are from Kansas and Missouri. The rest are from Montana and Utah. The Regional Manpower Administration, headquartered in Kansas City, in 1969 invited the 10 States

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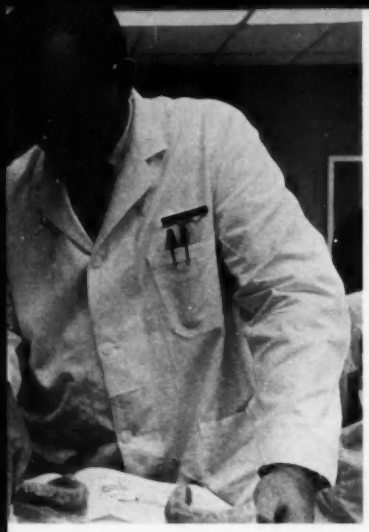

Photos by Arnie Solem and Jon Dunn

...en composing the region to send trainees. Invitations went to the region's Concentrated Employment Programs (CEP), Work Incentive Programs (WIN), and State employment service offices. Thirty-nine trainees were recruited; four dropped out.

The agencies in the four States which sent recruits (about half are WIN referrals) paid their relocation costs and are paying their living allowances. The Manpower Administration is paying for training and training

supplies. After the classroom work is completed, the students will return to their native States for the on-the-job training phase. Jobs will be arranged for them by the project officers and by the State employment service offices in their home areas.

"We had some unallocated funds and tried to do something a little different with it," said Regional Manpower Administrator William S. Harris. "We wanted to use the money for some experimental work and it turned out to be one of our better programs. I think it will help open the door to the dental profession to the disadvantaged and help do away with unrealistic entry requirements."

At present the apprenticeship program and the universities normally require dental technician applicants to have a high school degree. More than half the recruits for the Kansas City program are high school dropouts. All but five have since earned their equivalencies, and all will do so before the year is out, according to Ed McCarty, project director.

To enter the program they were required to score at the middle of the ninth grade level on the California Achievement Test and to pass the General Aptitude Test Battery on motor coordination, form perception, spatial relations, and manual dexterity. All but two of the trainees, who range from 18 to 39 years old, are women. The group includes whites, blacks, Mexican Americans, and Indians.

Their first 3 months of classroom work were devoted to academic subjects. They spent 40 hours a week on English, literature, social sciences, math, and science in special classes on the University campus at Kansas City. They now spend 5 hours a day in laboratory work, 2 hours listening to lectures, and 1 hour in supervised study. Classes are held in the University's new dental building.

Among the subjects are oral anatomy, metallurgy, preventative dentistry, full dentures, and occlusions.

They also are taught ethics and accounting. "There's a business side to the profession," McCarty explained. They are learning to work with ceramics, gold, silver, and similar materials used to make partial and full dentures, bridges, and other appliances for the mouth.

"You'd be amazed at how fast they learn," said Dr. J. E. Herbertson, chairman of the Dental School's Anatomy Department, who recently completed a series of lectures before the class. "In teaching human anatomy the great hangup is terminology. It's like learning a foreign language. I was apprehensive about what I could teach them. But they are so friendly and so enthusiastic. They picked it up very fast. It was a great experience and quite a pleasant surprise."

Dr. Herbertson said he was scheduled to teach for 11 2-hour periods. But the students were so anxious to learn, they asked him for an additional 4 hours. He gave them the time. "They're my friends," he said.

"We all love him," said Mrs. Lujuona Harrison, one of the trainees. "His lectures are really something. He makes you laugh."

The students now are looking to the next horizon—getting their certificates in December and going back home. "If I could take this training and have a job among my people, that would be perfect," said Myrna Arrow Top, a resident of the Blackfoot Reservation in Montana. □

R&D Reports

Following is a selective list of reports completed under contracts and grants from the Office of Research and Development, Manpower Administration, U.S. Department of Labor. The reports are based on research and experimental and development projects in the following areas: Manpower requirements and nature of jobs, labor supply and workers' qualifications, and counseling and evaluating techniques.

The listing for each item indicates, by one of the following sets of initials, where it may be obtained. The key to the initials is:

CFSTI—Clearinghouse for Federal Scientific and Technical Information, Springfield, Va. 22151. Reports may be purchased for $3 per paper copy or 65 cents per microfiche copy. Send remittance with order directly to the Clearinghouse and specify accession number (PB plus 6-digit number) given in the listing.

GPO—Government Printing Office. Send orders directly to Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402, with remittance for amount specified.

MA—Single copies free upon request to Room 2107, Inquiries Section, Manpower Administration, U.S. Department of Labor, Washington, D.C. 20210.

Other sources are indicated for a few publications. Order from the specified source or, for books, from bookstores.

Phase II—Optimizing the Benefits of Neighborhood Youth Corps Projects for Rural Youth, Guy H. Miles, William F. Henry, and Ronald N. Taylor, North Star Research and Development Institute. CFSTI—PB 185881.

Study of the environment, education, and characteristics of rural youth in the North Central States to determine how Neighborhood Youth Corps programs can be better adapted to meet their needs.

The Youth Labor Market, Edward Kalachek, National Manpower Policy Task Force, Policy Paper No. 12, 1969, Publications Office, Institute of Labor and Industrial Relations, P.O. Box 1567, Ann Arbor, Mich. 48106 ($1.50).

Review and evaluation of the literature on employment, unemployment, and labor force participation of teenagers and other young workers.

The Transition From School to Work, A Report Based on the Princeton Manpower Symposium, May 9-10, 1968, National Manpower Policy Task Force. CFSTI-PB 182965.

Report on a symposium designed to assess the dimensions of youth unemployment problems and to discuss remedial efforts.

Career Thresholds: A Longitudinal Study of the Educational and Labor Market Experience of Male Youth 14-24 Years of Age, Herbert S. Parnes, The Ohio State University Research Foundation and Bureau of the Census. CFSTI—PB 183539.

Report on the first of six annual surveys of a national sample of 5,000 young men.

A Comprehensive Assessment of the Problems and Characteristics of the Neighborhood Youth Corps Enrollees: A Pilot Investigation, William C. Eckerman, Eva K. Gerstel, and Richard B. Williams, Research Triangle Institute. CFSTI—PB 183080.

Analysis of characterstics of NYC enrollees in North Carolina and their current capacity to benefit from further education, training, or employment.

Report on Problems of Counseling Special Populations Pursuant to Government Manpower Programs, Edward Gross, University of Minnesota. CFSTI—PB 177564; Educational Resources Information Center, 4936 Fairmont Ave., Bethesda, Md. 20014, Accession No. MP 000626 ($1.35).

Blue- to White-Collar Job Mobility, James L. Stern and David B. Johnson, The University of Wisconsin, CFSTI—PB 177360. Industrial Relations Research Institute, University of Wisconsin, Madison, Wis. 53706. (Single copies free.)

An investigation of the extent and direction of blue- to white-collar shifts in Milwaukee County, Wis. and the kinds of people who made the shift.

Job Performance of Young Workers in Relation to School Background —A Pilot Approach Toward Using the Job Environment in Evaluating Both General and Vocational Education, Howard E. Bergstrom, University of Minnesota. CFSTI—PB 177419.

Study of the job success of 150 male graduates of general, academic, and vocational high schools in Minneapolis.

Experimental and Demonstration Findings No. 5: Orientation, Counseling, and Assessment in Manpower Programs. MA.

A checklist guide for procedures to be followed in counseling and assessment in short-term orientation programs.

Developing Group Counseling Models for the Neighborhood Youth Corps, Calvin Daane, Arizona State University. CFSTI—PB 182512.

Development and testing of five group counseling models.

A Study of the Effects of Examiner Race, Sex, and Style on Text Responses of Negro Examinees, John William Pelosi, Syracuse University. CFSTI—PB 178901.

Includes a brief review of related literature.

Project Gatekeeper: The Reduction of Job Discrimination by the Use of Self-Confrontation and Feedback to the Discriminator, Charles A. Dailey, The American University. CFSTI—PB 177352.

Past and Present Counseling and Placement Procedures in Private Employment Agencies—An Empirical Study, Thomas M. Martinez, University of Santa Clara. CFSTI—PB 188154.

Manpower Requirements for National Objectives in the 1970's, Leonard A. Lecht, National Planning Association. CFSTI—PB 177-821.

Examination of manpower requirements to achieve a set of 16 national goals.

Allied Health Manpower: Trends and Prospects, Harry I. Greenfield, Columbia University, Columbia University Press, New York, 1969 ($8.00).

Comprehensive study of the supply, training, and utilization of the 1.7 million health workers who have less than a college education.

The Impact of Technological Change on Manpower and Skill Demand: Case-Study Data and Policy Implications, Edward R. F. W. Crossman and Stephen Laner, University of California, Berkeley. CFSTI—PB 188694.

Examination of the effects of technological change on the skill profile of the work forces in selected industries, covering both direct (production) and indirect labor, including supervision, planning, and scheduling.

Breakthrough For Disadvantaged Youth. MA.

A study by eight scholars of 55 special youth programs. Analyzes them from standpoint of various components: Counseling, basic education, outreach, job placement, creation, and development, etc.

Experimental and Demonstration Findings No. 7: Inner-City Youth in a Job Training Project. MA.

An in-depth study of inner-city youth in Chicago JOBS project, to study particularly their attitudinal and motivational characteristics.

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Many handicapped people find their biggest obstacle is getting a job, not doing it. Having only one arm doesn't stop maintenance man Fred Beavers from clambering over the grease-coated, wind-whipped steel cables that carry the Palm Springs Aerial Tramway 1,000 feet up Mt. San Jacinto in California. For a report on a study of what could be done to give disabled people more employment assistance see ***Improving Job Services for the Handicapped*** in this issue of MANPOWER.

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